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DAILY DIGEST

Prepared in the Press Service, Office of Information, U. S. Department of Agriculture to present items of interest to agriculture and to agricultural workers. Views and opinions in these items are not necessarily approved by the Department.

Vol. LXXV, No. 41

Section 1

November 28, 1939

1940 A.A.A. CONSERVATION PROGRAM The Agricultural Adjustment Administration today announced national acreage goals for principal crops and the rates at which participating farmers can earn payments under the 1940 Agricultural Conservation Program. The 1940 program offers more opportunity for soil conservation than did the 1939 program, largely through encouraging practices which normally are not carried out on a large number of farms. The new program also increases the opportunities for participation by small farms. The 1940 program is in line with Secretary Wallace's recent announcement that the Department would give all possible aid to farmers in conserving soil resources.

"Insofar as authorized funds permit, the 1940 program continues the efforts of farmers toward abundance for the nation's consumers, conservation of our vital soil resources and parity income for agriculture," R. M. Evans, administrator of the Agricultural Adjustment Administration, said. "With it, farmers are prepared as never before to meet the shocks imposed by war in Europe and further demoralization of world trade. They have in the program a means of avoiding costly maladjustments such as resulted from the world war."

The 1940 program sets a national soil-depleting crop goal of between 270,000,000 and 285,000,000 acres, which is the same as the 1939 goal. This acreage, at normal yields, will provide ample supplies for all domestic needs, for export requirements and for an adequate reserve. The 1940 goal compares with an average of 308,000,000 acres in soil-depleting crops for 1928-1932 and about 275,000,000 acres in 1939.

HULL DEFENDS TRADE PACTS Secretary Hull expressed his gratification yesterday at the statement of Prime Minister Chamberlain over the radio day before yesterday that "there can be no lasting peace unless there is a full and lasting trade between nations." Mr. Hull defended the Administration's reciprocal trade program as an instrument to attain such a "lasting peace."

Agreeing with the British Prime Minister's remarks that "only by increased interchange of goods and services can the standard of living be improved," Mr. Hull declared: "I can only hope most earnestly that when the time comes to give these economic ideas broad and effective application our people will be sufficiently united in support to enable this country to make an appropriate contribution, which is so important to every phase of our future welfare." (New York Times.)

Curiosity
in Research

"The United States buys about \$300,000,000 worth of scientific research every year," says T. Swann Harding, of the Department, under the title, "What We Owe to Idle Curiosity," in America's Future (Fall). "At the top of prosperity in 1929, the sum so expended was only two-thirds as much... Compared to our estimated national income of the day, it was small change; it amounted to about \$25 out of each \$10,000 income. But of these huge sums, perhaps only a tenth is spent for fundamental, or basic, or so-called 'pure' research... But fundamental principles are discovered when highly gifted and well-trained scientific workers aimlessly pursue those things to which their idle curiosity attracts them. That is pure research.

"It is a curious thing that if you find a well-trained scientific research worker, then give him a small salary, necessary laboratory space, equipment, and supplies, and thereafter let him more or less follow his own whims, he will almost inevitably make scientific discoveries of importance. Later still the fundamental principles he unearths will be found to have commercial value... A research worker often finds out more by accident than he does on purpose. Time after time, you read in scientific papers that this or that was done by chance -- the clean-up man failed to wash out a container or some solution was forgotten -- and signal discoveries followed. Almost alone among professional men the research worker accomplishes as much by accident as he does deliberately.

"The ancient Greeks were wise enough to lay the foundations of abstract science. In fact, the objective of obtaining the most speedy practical results has often impeded science progress. Idle curiosity is the better motivation. Had electrical engineers been asked eighty years ago to dispense with wires, that would have been absurd. For idle curiosity had not then disclosed enough about the nature of electro-magnetic fields to make it other than an absurd objective. Free research operating under the whip of intellectual curiosity animating a well-trained mind is society's greatest asset."

Food Supply
in Wartime

"In a recent speech, Secretary Wallace of the Department of Agriculture said that the European War should make no great change in farm plans for increase in production, and the new AAA conservation program for 1940 does not provide for any large increase in production," says an editorial in the American Agriculturist. "That is right. American farmers produced so abundantly in order to feed the world during the last war that they never were able to slow down enough to fit the decreasing demand when the war was over. People went foolish about food production -- parks were plowed up, marginal land and boarder cows pushed to the limit. When the war was over, we kept right on. A study of world food supplies shows that, even if the war continues, there is enough on hand with a normal planting next spring to be more than sufficient. In making plans for the future, every farmer, every manufacturer, and every other citizen has the experience of the other world war to guide him if he will be smart enough to use it..."

1940 Wheat Situation

The 1940 United States wheat crop may be less than consumption unless "unusually favorable" growing conditions prevail for the remainder of the growing season and unless conditions for spring wheat also are favorable, the Bureau of Agricultural Economics says in a summary of the current wheat situation. This would result in a reduction in the United States carryover. Available information indicates, the Bureau states, that the acreage seeded to wheat in the United States for harvest in 1940 may be about the same as was seeded for harvest in 1939. If the total wheat seedings for harvest in 1940 are unchanged from the 64,600,000 acres seeded last year, the average yields are obtained, production will be about 760,000,000 bushels. This would be about 75,000,000 bushels more than the average domestic disappearance of 685,000,000 bushels during the last 10 years. World wheat acreage next year is not likely to be greatly different from this year, and average yields would again result in a crop almost equal to prospective world consumption, it was said. This would not substantially reduce the large world carryover stocks. (Wall Street Journal, November 27.)

Science Congress

The eighth American Scientific Congress, in which leading scientists from all the Americas will participate, will be held in Washington from May 10 to May 18, 1940, under the auspices of the Government of the United States. Definite plans for the congress, expected to be one of the most important scientific gatherings ever held on the Western Hemisphere, are being formulated by the Department of State. The congress will be divided into the following eleven sections: anthropological sciences; biological sciences; geological sciences; agriculture and conservation; public health and medicine; physical and chemical sciences; statistics; history and geography; international law, public law and jurisprudence; economics and sociology; and education. (New York Times.)

Spraying Method

A new method of applying sprays in the Pacific Northwest consists of putting the water and insecticide concentrate in separate tanks and bringing them together as the water is forced through the pump into the spray lines. Proper ratio between water and concentrate is maintained by a special meter. This equipment can be operated several hours without attention. It also eliminates the need for agitating large amounts of spray mixtures. Experiments also indicate that it saves nearly one-fourth the cost of certain insecticides (arsenic and cryolite). (Farm Journal and Farmer's Wife, December.)

Food Stamps

Secretary Wallace has announced the selection of Richmond, Virginia, as an area for the food stamp plan. Richmond has a population of approximately 182,000. There are about 5,000 relief cases in the city, representing 15,000 individuals.

Spring Wheat A wheat varietal survey recently made by the North-Variety Survey west Crop Improvement Association with the cooperation of elevator managers in the spring wheat states indicates Thatcher has received wide acceptance this year, though Marquis and Ceres are grown to a large extent in the western Dakotas and Montana. Planting of spring wheats rank as follows: Thatcher, Marquis and Ceres, with a small volume of other varieties. The survey showed a small acreage of many inferior wheats, such as Velvet Chaff, Progress, Marvel, Ghirka, Komar, Hope, Coronation and Marquillo. These wheats have been found unsatisfactory because they lack such baking essentials as proper loaf volume and texture, high grade protein and good color. Undesirable varieties of wheat create a serious problem for the elevator manager with limited bin space. Large quantities of inferior varieties in any locality would cause loss to the community. Even small amounts affect general values and have a tendency to lower the local price because, of necessity, they are shipped with better varieties, and lower the quality of an entire carload. (Grain and Feed Journals Consolidated, November 22.)

Poster on The U. S. Department of Agriculture has just issued
Bang Disease a new poster, to be used in connection with the federal-state campaign against Bang's disease. Besides portraying the disease in a pictorial manner, the poster carries a message to the public regarding the cause, sources of infection, symptoms, prevention and eradication. The poster is printed on light cardboard and measures 16 by 20 inches. The Bureau of Animal Industry will furnish copies free as long as the supply lasts. The Bang's disease poster is the third of the so-called Live Stock-Health series planned by the Bureau. The first two deal with anthrax and infectious anemia. (The North American Veterinarian, December.)

Chemurgy on In the article, "Rainbow Over the Farm," in December
the Farm Harper's, Roger Burlingame lists discoveries which chemistry has made in dealing with agricultural products and argues that "the traditional war between the farmer and the industrialist may be mitigated since farm products may be the new and chemically exploited source of many essential industrial raw materials, and the farmer may take over a part of the work formerly done by the oil man and the miner." "Today," he says in part, "after years of intense effort on the part of scientific experimenters, universities, State departments of agriculture, and the Federal government, the bulk of the farmers have been convinced of the value of science in the field. Nevertheless, the hangover of conservatism remains. Farmers more than any other class are 'from Missouri' and 'have to be shown'. Thus it is not an entirely simple matter to persuade the farmer that chemurgy is a force for his own advancement...Much of the work of the chemurgical propagandist must go to converting the farmer...Government's interest in chemurgy has been shown in the authorization by Congress of four regional research laboratories in New Orleans, San Francisco, Peoria, and Philadelphia..."

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Section 1

November 29, 1939

FEED GRAIN SUPPLIES

The supplies of feed grains available for the 1939-40 feeding season are now estimated at 110 million tons, says the Bureau of Agricultural Economics. The increase of 2 million tons over the October estimate is based on the November 1 estimate of the 1939 corn production, which showed an increase of 59 million bushels over the October 1 estimate. Other changes in the estimated supplies of feed crops and feedstuffs were not significant.

The 1939 corn supply is now estimated at 3,152 million bushels. This is the largest supply since 1932 and with the exception of that year is the largest in more than 15 years. This figure includes the November 1 estimated production of 2,591 million bushels, and the October 1 carry-over of 561 million bushels. The grain sorghums crop was estimated on November 1 to be 86 million bushels, or 2 million bushels below the production indicated on October 1.

LARGE GRAIN PURCHASES

European buyers re-entered the North American grain market yesterday for more than 10,000,000 bushels, the biggest purchases in one day since the war began, helping to lift domestic prices of all principal crops, says an Associated Press report from Chicago. Most of the buying was centered in Canadian grain, principally wheat, but inasmuch as the Dominion's large surplus is weight on world wheat markets in general, this business tended to strengthen the Chicago price. Winnipeg prices for wheat shot up 2 5/8 cents at one stage, their sharpest advance since early days of the war. Wheat contracts at Chicago rose 1 3/8 cents, with May and July at their best levels since November 8.

NEW JERSEY FOREST FIRES

Eight more forest fires in North New Jersey yesterday brought the total of forest and brush fires in the area since the beginning of the hunting season on November 10 to 625, burning over a total area of 1,300 acres, according to Bernard Bartlett, division warden. State Warden Leroy S. Fales said the next three days would be "exceedingly dangerous" because of dry weather and fall winds and woodsmen were warned to use great care. (New York Times.)

Group Medicine Group medical plans are now working for 128,000
for Farmers farm people, according to T. Swann Harding, Office
 of Information, in an article, "The Farmer Gets Medi-
cal Care," in Christian Century (November 29). "The Farm Security Ad-
ministration also makes medical aid loans," he continues. "Because
farmers are prevented from paying their loans by reason of illness in
their families or of themselves, a special additional sum is added to
the loans to enable them to contract for medical care on an annual
basis at a small monthly rate. Local medical associations help organ-
ize these group health programs to provide low income farm families
with medical care at \$2 or \$3 a month.

"No rigid plan is enforced on the various communities. The plan
is adjusted to fit the needs of the particular community. The doctors
aid in making the plan, supervise medical standards, go over the bills
for treatment and take such action as is deemed wise. Usually the
money collected monthly goes into a pool. Such doctors as wish to
join the plan do so. Patients have free choice among the doctors
joining up and often 90 percent of the doctors in a locality do join.
If the fund in the pool is insufficient to pay all doctors that month
for services rendered at the fees they themselves have set they make
a voluntary percentage reduction. If there are excess funds this
goes over for surplus. In some communities certain funds are set aside
also to pay hospital costs and hospitals near by contract to provide
service for members on a basis that is satisfactory to both parties.

"The guarantee of medical care not only secures the loan; it acts
as economic security for the doctors...State medical journals have
often commented favorably on these plans. They lack red tape. The
potential patient has free choice of doctor. The doctor is paid for
work he formerly did gratis or did not do at all. The physicians
themselves supervise all therapeutic standards and monetary arrange-
ments. Soon these plans will be extended to 700,000 farm families..."

Paper "Can" The first pack of fruits, vegetables and fish in
for Foods a new type of paper pliofilm and cellophane container
 has been successfully completed, according to a Holly-
wood (Calif.) report in Food Field Reporter (November 27). Under the
new process no scrapping of canning equipment is necessary, says the
report, as the usual processes are followed and are built around
standard automatic canning equipment. Briefly, the product is packed
in a pliofilm bag, then inserted in an especially prepared cardboard
outer package, then wrapped in cellophane. The package is then cooked
in regular canning retorts. Products are not on the market but are
being distributed for inspection.

Standards "One little-publicized means of improving our
Research crops and of ascertaining just how good our crops are
 when they reach the markets is unusual in its essence,"
says C. B. Sherman, Bureau of Agricultural Economics, in Better Crops
with Plant Food (November). "It is the ingenuity displayed by the
improvement and standardization workers. When they find themselves up
against a total lack of method or instrument to accomplish a needed re-
sult or make a needed measure, they apply themselves to working out, de-
signing, or inventing the appliance or method that will do the job. Or
sometimes the equipment or method in use seems too slow and cumbersome.
Then they set to work to make it more rapid and practicable. They im-
prove it sometimes beyond recognition. It cannot be claimed, of course,
that all of these workers are gifted with the inventive sense, but a
surprising number have demonstrated its possession to some degree. The
results have greatly increased the possibilities of the standardization
research and the services offered by the U. S. Department of Agricul-
ture, and they have given practical effect to the research effort and
to the technical method of approach..."

Community Commenting on the fact that community livestock
Stock Sales sales sometimes spread disease, the Missouri Ruralist
 (November 25) says editorially: "Community sales of
livestock have proved a valuable means of distribution between seller
and buyer. Sale totals run into big money in Missouri...But require-
ment of a certificate of health from a graduate veterinarian for every
animal offered is not a prohibitive measure. The inspection fee
should be small and should be set by the state veterinarian. As an
additional safeguard a competent veterinarian should be employed by
the sales managers to check on livestock assembled before put up for
bids. Community sales are growing in number and popularity and the
managers might well get together on a plan to protect the buyer..."

U. S. Trade Brazil will divert more of her trade to the United
with Brazil States during the present war than she did in the last
 World War, in the opinion of Brazilian economic inter-
ests reported by the Commerce Department. "Diversion of Brazilian
trade from Europe may be greater than before, in view of financial
assistance given to American exporters to Latin America by the Export-
Import Bank, the possibility of more adequate shipping facilities,
better protection for shipping in the Western Hemisphere and general
improvement in export facilities in the United States," the department
said. The principal obstacle to greater expansion of United States
trade with Brazil, the report said, "appears to be the credit policy
of American firms calling for payment in the United States before ship-
ment." (New York Times.)

Districts In the two years since the first soil conservation
for Soil district was organized by farmers under State law,
Conservation erosion control in districts has spread over more than
7,000 farms embracing nearly two million acres, H. H.
Bennett, Chief of the Soil Conservation Service, has announced. On
these farms, scattered through 116 districts in 23 States, nearly 72,000
acres have been retired from cultivation because of inability to pro-
duce crops profitably. Some of this submarginal land has been planted
to trees and other types of permanent vegetation. Permanent hay acreage
has increased from 23,700 acres to 68,900 acres.

Experienced soil conservationists have helped farmers work out
crop rotations for 350,000 acres. Cooperating farmers have established
sound crop rotations on 104,000 of these acres. Before agreement the
acreage farmed by rotation was slightly more than 22,000 acres. Pasture
and range development have been carried out on 780,000 acres, an in-
crease of some 130,000 acres. Livestock have been excluded from 58,000
acres of woodland formerly in pasture.

Farmers, assisted in most cases by CCC boys, have planted over 9,000
acres to trees, and adopted plans for the conservation of forest re-
sources. Approximately 4,000 acres have been developed for the produc-
tion of food and cover for desirable species of birds and mammals. A
great amount of a formerly idle 57,000-acre area has gone into the pro-
duction of trees, shrubs, vines and permanent hay crops. Contour culti-
vation has been established on over 200,000 acres, an increase of 115,000
acres. Cooperators have agreed to strip-crop 230,000 acres; more than
62,000 acres are already cultivated in strips alternating on the contour.
Terraces have been constructed on 83,000 acres.

Commenting on the rapid growth of districts in the last two years,
Doctor Bennett said: "They provide a medium through which farmers can
work together in attacking a wide variety of land use problems. They
also offer an excellent mechanism for transforming the plans of local
land use planning groups into actual work on the land."

Record in Production of paperboard in October exceeded 500,000
Paperboard tons for the first time in the industry's history, estab-
lishing a new record high for the third successive month,
the Department of Commerce has reported. The month's output was 506,466
tons as compared with 370,977 tons in October, 1938, and 334,619 tons in
October, 1937. (Press.)

Federal The new Federal Seed Act will become effective
Seed Act February 5, 1940, as to imported agriculture and vege-
table seeds and as to agricultural seeds in interstate
commerce. Provisions pertaining to vegetable seeds in interstate commerce
will become effective August 9, 1940. The new act is expected to result
in marked improvement in the quality of seed made available to farmers,
and makes mandatory that seed shipped in interstate commerce shall be
properly labeled. (The Maryland Farmer, November.)

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Section 1

November 30, 1939

FOOD STAMP LIST, F.S.C.C. TO BUY PORK The Department of Agriculture added pork products, rice, oranges, grapefruit and hominy grits yesterday to the list of surplus farm products under the food stamp program. Commodities already on the list include butter, eggs, raisins, apples, dried prunes, onions, dry beans, fresh pears, flour, corn meal and lard. The plan is in operation in 23 cities.

The department also authorized the Federal Surplus Commodities Corporation to buy surplus lard and certain cuts of salt pork to be distributed among relief families where the stamp plan is not in use. Pork products placed on the surplus list include cuts of fresh, chilled, cured or smoked pork, but not pork packed in can or glass containers.

Secretary Wallace said the inclusion of pork products would provide farmers of the corn belt with "a still broader market" for their meat products. (A.P.)

MEAT-PACKING INDUSTRY The nation's billion dollar meat-packing industry is "back in the black" and has nearly reached its normal level of output, it was disclosed yesterday in a survey made by the Institute of American Meat Packers. Employment was at its best level in years, it was said, and plant volume was expected to expand, reflecting increased production of livestock. About 5 percent more meat was produced and consumed in the United States in the fiscal year just closed than in the similar period in 1937-38. (A.P.)

COTTON AT SEASONAL TOP Cotton futures chalked up new high marks on the current forward swing yesterday following another sharp advance in foreign markets, says an Associated Press report from New York. Final prices were up 8 to 10 points. Holders of contracts were reluctant sellers throughout the session and the market easily responded to demand from numerous sources.

VA. TOBACCO MARKETS Auctioneers virtually cleaned their blocks on Virginia's dark-fired tobacco markets Tuesday, leaving only a small amount of leaf to be moved before the marts close to reopen in December, when Imperial Tobacco buyers are expected to begin following sales. Low grades predominated and averages ran around the \$11 per hundred mark, although the small amount of better grades on hand brought as much as \$40 per hundred. (A.P.)

Department
Yearbook

The 1939 yearbook of the Department, "Food and Life," brings up to date information on nutrition. First copies of the book are off the press.

"Food is fundamental to adequate training and decent opportunity," declares Secretary Wallace, in the foreword. "Probably 99 percent of the children in the United States have an heredity good enough to enable them to become productive workers and excellent citizens, provided they are given the right kind of food, proper training, and ordinary opportunities. Fifty percent of the people of the United States do not get enough in the way of dairy products, fruits, and vegetables to enable them to enjoy full vigor and health. A large number of them do not get enough because they cannot afford it. It is the duty of the farmers, the Government, and organized labor to cooperate to see that the children of these people are better fed than their parents were."

The 1939 yearbook combines a discussion of nutrition of human beings and farm livestock in a single volume. Gove Hambidge, yearbook editor, says: "Because of his acquaintance with livestock, the farmer should be the first to realize the importance of nutrition with human beings. Any livestock man knows that it costs more to feed an animal well than to let it starve along. A great many people in the United States are starving along. Half of them, according to recent surveys, do not have even fair diets, and only about 10 percent have really good diets. The farmers stand to gain if poor diets are corrected. The immense surplus of many farm products would be wiped out if enough people could be well nourished. In fact, farmers would have to produce larger quantities of some of the very products that are now in surplus."

The 1939 yearbook is the fourth in a series of yearbooks dealing with major aspects of farming. In 1940 the series will be continued in a book titled "Farmers in a Changing World".

Cottonseed
Quality

Tests of thousands of cottonseed samples show wide variations in both the quantities and qualities of the oil, cake, and other products that can be produced from the different lots, says the Agricultural Marketing Service. In some instances the recoverable oil amounts to as little as 200 pounds to the ton. In other lots it runs as high as 390 pounds. The amount of 41-percent cake or meal from a ton of seed varies from 650 to 1,050 pounds. And products from the different lots of seed also show wide variation in quality. These variations in both quality and quantity account for the willingness of many mill operators to pay premiums for high-quality seed. More and more seed is being bought from year to year on the basis of quality.

Drought Continues No drought-relieving rains occurred during the past week and, consequently, a serious lack of soil moisture continues over much of the country, says the Weekly Weather and Crop Bulletin. In many midwestern areas September and October combined were the driest of record, followed by extremely scanty rainfall so far in November. Minneapolis, Minn., with records going back more than 100 years, has had the driest November in more than a century. The shortage of water supplies for domestic use and for livestock is becoming increasingly serious in some interior sections, with considerable deepening of wells. In the southwestern Plains the dry, loose condition of the topsoil favors severe dust-storms with high wind, although no storms of consequence occurred during the past week; there were local duststorms in some Central Northern States.

The winter wheat crop shows some slight improvement in parts of the eastern belt, although little growth occurred because of the prevailing low temperatures. In the Great Plains States, except eastern Kansas and extreme eastern Oklahoma, the outlook remains decidedly unfavorable. In Kansas the condition of wheat is good in eastern counties, but much has not germinated in the western half of this State. In Oklahoma, except the extreme east, slow progress or deterioration is reported. In Texas wheat made but little growth because of dryness. In the western and principal producing sections of Iowa wheat is poor, while the drought in Nebraska continues unabated.

Rural Federal Credit Unions Rural organization has been making progress among federal credit unions, says Circular No. 1, "Cooperative Thrift and Credit," issued by the Farm Credit Administration. A number of farmer cooperatives have very successful federal credit unions among their members. From 90 to 100 rural community federal credit unions have been chartered. The Farm Bureau, the Farmers' Union, and the Grange have sponsored such organizations and at various times have given them the stamp of approval. As a thrift-promoting and cooperative small-loan agency they have a distinct place in the country community, although they will doubtless continue for a long time to come to be essentially an urban institution. Circular No. 1 is available from the Farm Credit Administration, Washington, D. C., for the asking. (News for Farmer Cooperatives, November.)

Food Stamps Secretary Wallace has extended the Birmingham, Alabama, food stamp area to include all of Jefferson County, effective December 11. Birmingham was selected as a stamp plan area on July 8, and operations there began August 1.

Southern Great Plains Substantial progress has been made toward the reconstruction of Southern Great Plains agriculture, says Roy I. Kimmel, Bureau of Agricultural Economics, in an article in Soil Conservation (November). "In this work the Soil Conservation Service has had an important part. Effort to date has been concentrated on two basic problems, (1) the elimination of wind erosion, and (2) the development of a stable system of agriculture that will bring a greater degree of security to a region where production hazards are acute...Demonstrations, carried on cooperatively by farmers and the service, have not only performed a useful service in showing how to control wind erosion, but also have shown that crops can be grown even in the driest years provided proper water conservation practices are used. In 1937 crops were raised on the SCS project at Dalhart, Texas, equaling any produced in the wettest years. Henceforth one of the principal objectives of the service in the Southern Great Plains will be to provide assistance to soil conservation districts as they become established.

"Among the other programs of the Department that will tend to prevent recurrence of wind erosion is the water facilities program authorized by the Pope-Jones Act of 1937. This program is designed to provide, through loans to producers, water facilities to both individual farmers and to groups of farmers...The SCS has the responsibility for working out with individual farmers just what kind of facility is desirable. The Farm Security Administration provides the funds.

"Early in 1938, the unit-reorganization program, one of the most significant developments in the building of a sound agriculture for the Southern Great Plains, was inaugurated. The idea behind unit reorganization is diversified farming carried out on a sufficient acreage to ensure an acceptable income in dry years as well as in wet years...Most of the units developed have involved ownerships by four or five different persons, with the new units ranging in size from 2,000 to 4,000 acres as opposed to the unit in one section or less that prevailed in the past. The FSA will lend the farmer money with which to buy a foundation herd of livestock and necessary equipment and to provide money for cash leases and operating expenses. Annual home and farm budgets are made for each farm by the local farm security supervisor. At least one year's feed supply is held in reserve. Trench silos, inexpensive to construct, are used. The plan calls for the farmer to develop water-spreading devices and arrange for stock water. Range surveys are made annually so that the grazing land will not be overstocked. Farmers may carry out these soil and moisture conservation practices in cooperation with the Agricultural Adjustment Administration program..."

Newsprint Supply The increasing exports of newsprint from Canada show that war restrictions on trade will not affect this industry adversely, the Department of Commerce has reported. From Ottawa came a report to the department that there was a wide margin to take care of a fairly broad expansion in demand for newsprint, which is taken largely by United States newspapers. (New York Times.)

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Section 1

December 1, 1939

FREIGHT RATES FROM SOUTH

The South won yesterday an important freight rate victory when the Interstate Commerce Commission ruled that rates on certain manufactured and processed goods from the South should be on substantially the same rate level as within the North. Rates on these articles now range from about 105 to 160 percent of the comparable rates within the North. The order is to take effect on March 1 next. While the decision covered only a comparatively small list of manufactured and processed articles, southern interests regarded the case as an extremely important test.

The decision was given on a 5-to-4 vote, two commissioners not participating. The majority said that the rates prescribed generally are on lower levels than the present rates on the same articles from the North to the South. "It does not necessarily follow, however," the decision said, "that this, in itself, would be unfair to northern producers and shippers so long as the south-bound inter-territorial rates are on levels no higher than the rates on like traffic within the South." (A.P.).

FORESTRY BEQUEST

Robert Marshall, chief of the Division of Recreation and Land of the Forest Service, left practically all his estate for the preservation or maintenance of wilderness conditions in America, preservation of civil liberties and for education in economic conditions, says a report in the New York Times. This was disclosed yesterday in Surrogate's Court where his will was offered for probate. The petition for probate accompanying the testament formally valued the estate at "more than \$20,000."

He directed that his residuary estate be divided into four parts, which are to be held in trust, one part for the creation of a charitable trust to "preserve wilderness conditions in outdoor America and to increase the knowledge of the citizens of the United States of America as to the importance and necessity of maintaining wilderness conditions in outdoor America for future generations."

COFFEE SUPPLY

The world's visible supply of coffee on November 1 reached the highest point in more than five years at 8,334,069 bags, the New York Coffee and Sugar Exchange has announced. The total, which does not include stocks in the interior of Brazil or coffees still pledged against the 1930-40 coffee loan, compared with 7,918,158 bags on October 1 and 8,498,972 on September 1, 1934. (New York Times.)

Poultry R.O.P. "The first official egg laying test on a progeny-Progeny Test testing basis completed its year with the other egg laying tests in the country this fall and pointed the way towards many new possibilities in the field of competitive poultry breeding," says C. S. Platt, New Jersey Experiment Station, in Poultry Tribune (December). "This project, developed by the New Jersey Station at the request of the R.O.P. breeders in the state, received entries from official R.O.P. breeders only, and was designed to encourage the breeding and selection of fowls on a progeny basis, the only scientific program for improving poultry that has been developed up to this time. Extremely variable results were obtained, which is important to remember, because all the birds entered were from official matings made under the rules of the National Poultry Improvement Plan. Apparently more than rules are needed to develop stock capable of reproducing itself with some degree of uniformity.

"The best pen, an entry of White Leghorns, did not lose any birds during the year and had a production of 256.1 points, 245.2 eggs per bird...In the family scores, a Rhode Island Red entry took first place with an average production of 275.6 points, 259.8 eggs per bird...Individual bird records in the R.O.P. Progeny Test compared favorably with those of the regular official egg laying tests in New Jersey, a Rhode Island Red taking first place, a score of 314.25 points, 301 eggs.

"The average production of all the birds in the R.O.P. project was 201.64 points, 198.41 eggs. Mortality was 24.83 percent. This new type of test should help to focus attention on the necessity for carrying on progeny testing to prove the value of matings used in official breeding programs."

From Soil "...Heretofore research studies in regard to agriculture have dealt mainly with increasing yields economically, improving quality of products, controlling diseases and insects, and processing for market," says an editorial in Farm and Dairy (November 24). "But food is produced for nourishment, and the time seems ripe for beginning a system of study that will start with the soil and go right through to man. Such a study now has been undertaken by the United States Department of Agriculture in cooperation with several research agencies. It is designed to discover ways of increasing the nutritional value of foodstuffs produced on American farms. It will include studies of soil type, soil and crop management, and plant, animal and human nutrition. The result of this study will be far reaching, since they will benefit everyone. It should, therefore, be given every possible encouragement and the wholehearted cooperation and support of the entire nation."

Timberland Problems Research in a score of fields is urgently needed for the solution of America's pressing problems of forest and range utilization and the protection of watersheds, members of the Society of American Foresters were told recently, by Charles A. Connaughton of the U. S. Forest Service, with headquarters at Fort Collins, Colorado. Particularly difficult are the problems of watershed control, he pointed out, because owners of watershed areas seldom receive the benefits of control measures, which cost money and labor on the spot but go mainly for the help of lands further downstream. Nevertheless, community interest dictates that protective steps be taken, and these depend on research for best effectiveness and economy. Rangeland research is needed for the solution of problems arising out of overgrazing, which not only brings about the displacement of good forage species by weeds but even the destruction of the soil itself through erosion. Research has already suggested that native grasses and other plants, rather than exotics, may be the best for rangeland restoration, Mr. Connaughton stated. (Science Service.)

Civil Service Examination The United States Civil Service Commission has announced the following examination: No. 3, unassembled; Protozoologist, \$3,800, Associate Protozoologist, \$3,200, Assistant Protozoologist, \$2,600, Bureau of Animal Industry. Applications must be on file not later than the following dates: (a) January 2, 1940, if received from States other than those named in (b); (b) January 5, 1940, if received from the following States: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.

Century of Statistics The November issue of the Journal of Farm Economics is devoted to a century of progress in agricultural statistics, commencing with the first U. S. Census of Agriculture taken in 1840. Articles by Department workers are: "Developments in Crop and Livestock Reporting Since 1920" by Joseph A. Becker and C. L. Harlan, and "Estimating Local Market Prices and Farm Labor Since 1920" by Roger F. Hale, of the Agricultural Marketing Service; "Future Improvement in Agricultural Statistics" by Charles F. Sarle, of the Bureau of Agricultural Economics; "An Experiment in the Design of Agricultural Surveys" by Raymond J. Jessen, B.A.E. and Iowa State College.

Farm Price Index Prices received by farmers for their products November 15 averaged the same as those received in mid-October, the Agricultural Marketing Service reports. But at 97 percent of pre-war, the all-commodity index was 3 points higher than on November 15, 1938.

Parachutes for "Smokechasers, the begrimed and hardened woodsmen
Smokechasers who form the fire-fighting shock troops on the far-
flung forest front of the West, now have wings," says
an editorial in American Forests (December). "And in this fact, it
would seem, the prayer of forest administrators for speed and more
speed in getting men against flames once they are discovered may be
realized. At least the experiment now being conducted by the federal
Forest Service in the timbered hinterlands of the Chelan National
Forest, in Washington, described in this issue (by David P. Godwin,
division of fire control, Forest Service) points to a highly successful
initial step in this direction. By means of the modern parachute and
a refined jumping technique which permits landings in rugged, timbered
terrain, smokechasers during the experiment were enabled to attack
within thirty minutes a fire which, under present conditions of ground
travel, would have required eight to ten hours to reach. When it is
considered that few forest fires in rugged western country reach danger-
ous proportions within an hour or so after discovery, that the time
involved in getting men and equipment on the job usually spells the
difference between quick suppression and a destructive, uncontrollable
conflagration, the significance of this dramatic experiment is clear.

"It is too early, of course, to assign the parachute jumping smoke-
chaser a definite place in the system of forest fire control now in
force...Mass jumping in the delivery of large crews to big fires, as
dramatic as it might seem, is not the purpose of this experiment. The
objective is to deliver the smokechaser and his tools on the scene of
a fire as quickly as aircraft and parachute can get him there. Should
this be accomplished, many of the big fires now destined for newspaper
headlines in the years ahead may never happen. In searching every
device and technique of the new age for more effective weapons with
which to battle the fire enemy, the Forest Service is to be commended."

Egg Case A case made entirely of fiber with 7 molded pulp
trays and no center dividing wall is now available to
poultry-raisers. The separate cover is fastened with wire clamps.
The case ships well in express lots and, while cheap enough for one
trip, it has carried as high as 15 shipments. (Successful Farming, Dec.)

Minnesota Reports come in to the Minnesota station on the
Station Pear hardiness and disease-resistance of its new pear, called
Minnesota Number 3, which has been stocked by nurseries
and has received distribution in a preliminary way. It is resistant
to blight. The Minnesota station will name and introduce it. It is
hardly even in northern parts of the state, is russet-colored, sweet,
and juicy. It is small but will be useful in canning in spite of this
drawback. (Successful Farming, December.)

DAILY DIGEST

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Vol. LXXV, No. 45

Section 1

December 4, 1939

RECORD DRY AUTUMN

The driest fall of record from the Appalachian to the Rocky Mountains, is a general summary of the months of September, October and November, says J. B. Kincer of the Weather Bureau. Most of the area received for the three months less than half the normal rainfall and some sections less than one-fourth the usual amount. Sioux City, Iowa, had the lowest rainfall of record, only .6 of an inch for the three months, or about 10 percent of normal. Dodge City, Kansas, and North Platte, Nebraska, had only .8 of an inch for the period. "Other outstandingly dry falls," says Mr. Kincer, "were 1888, 1892, 1893, 1895, 1917 and 1932."

November was outstandingly dry everywhere east of the Mississippi River, except locally in the Middle Atlantic area and the extreme South. The Northern States from Iowa and Minnesota westward to the Pacific Ocean also had very little moisture. Large sections of the northern Great Plains and the northern Rocky Mountain area had no measurable moisture during November. A long record at Minneapolis, Minnesota, shows the driest November in more than a hundred years.

WHEAT LOANS EXTENDED

Commodity Credit Corporation has announced the extension to April 30, 1940, of all loans secured by wheat in warehouses. Under the 1939 program all loans secured by warehoused wheat matured seven months from date, or April 30, 1940, whichever is earlier. If a farmer has not repaid his note by April 30, Commodity Credit Corporation proposes to take title to the wheat. Warehoused wheat then pledged as collateral to loans will be acquired by the corporation on April 30. Deliveries of farm-stored wheat collateral may be made as soon as practicable after that date. It is expected that producers will have an opportunity to reseal wheat in those areas in which farm-stored wheat, in good condition, may be carried through the summer without loss from insect infestation.

All wheat in good condition acquired by Commodity Credit Corporation on April 30 will be held until such time as it may be sold in an orderly manner for not less than loan value plus interest and charges, or will be transferred to Federal Surplus Commodities Corporation for disposal in export channels or for relief. Some wheat may also be sold or transferred to Federal Crop Insurance Corporation for the insurance program. Commodity Credit Corporation proposes to carry sufficient wheat to cover the domestic requirements until the 1940 crop is determined.

Preferences
in Bread

Discussing bread flavor, in the Journal of Home Economics (December) Betsy M. Watts, of the California Experiment Station, says: "Apparently it is no easy matter to find out exactly what the American public prefers in bread flavor. King, Coleman, and LeClerc (of the Department) in a consumer preference test on breads of varying degrees of freshness and made with different classes of wheats, grades of flour, bleaches, methods of mixing, fermentation, baking temperatures, and types of formula, found that their judges decidedly preferred a fresh bread and one made with a rich rather than a lean formula; but the smaller differences due to other variables seemed to be indistinguishable by many of the judges...Bailey and LeClerc have made bread without yeast, using as their leavening agent a solution of hydrogen peroxide which they added during the mixing of the dough. The leavening gas, oxygen, was given off gradually over a period of from 12 to 16 hours. When all the hydrogen peroxide was decomposed the bread was baked. Loaves of excellent volume and texture were obtained, but, as might be expected, flavor and aroma were distinctly inferior...

"Countless references to the preparation of special types of breakstuffs fill the baking journals. Of these, the most interesting was full description in the January 1939 issue of Bakers Technical Digest of a new wheat-germ flour prepared by a special milling process in which the germ is retained and milled with the endosperm, not separated and then reincorporated as in the usual preparation of such flours. The resulting flour is low in fiber, high in water absorption, bakes bread of good quality and excellent wheaty flavor and aroma. Most important, the flour does not turn rancid, as have all such flours in the past; in fact, it appears to keep better than white patents from the same wheat..."

FSA Farmers
Grow Feed

There is a steady decrease on thousands of small farms throughout the country in the amount of land planted in cash crops, according to a recent survey by the Farm Security Administration among its borrowers. Among the 232,947 small farm families in the survey, little more than one-third of their acreage, or about $5\frac{1}{2}$ million acres, was in cash crops. This is a radical change from the system on small farms under which most of the acreage was devoted to cash crops and very little attention was paid to cover crops. Farm Security advises its borrowers to raise their own feed for livestock, and to grow as much food as they can for home consumption. Families cooperating in these revised farm plans planted more than 9,000,000 acres in crops for farm and home use. They also planted more than 1,333,000 acres in cover crops. Altogether, they had a little more than 10,500,000 acres in farm and home use and cover crops against a little more than 5,500,000 acres in cash crops.

Food Stamp Program

"An adjustment to the idea of change and experiment is impressed today upon the visitor who moves about the country," says Thomas L. Stokes, in a St. Paul report in the Washington News. "There seems to be an acceptance of the need to discover new ways to meet the problems of a complicated economy...The food-stamp plan is an effort to adjust two problems, a glut of farm produce, and millions of people living on bare subsistence diets. In seeking to solve this problem through the food-stamp plan, business men, bankers, chamber of commerce officials, relief directors, city officials have advised together in a number of cities. The plan has found widespread acceptance because it represents a cooperative endeavor, carried out through regular business channels, from which the benefits spread up and down the line.

"Aside from its actual cash assistance to farmers and grocers and business in general, and the provision of a more adequate diet for families on relief, this cooperative endeavor has an educational value that may prove of far-reaching significance. Bankers and business men who have never known much before about this problem of relief, nor how so many of their fellow townsmen existed, are finding out first-hand. As a consequence they are concerning themselves with the nation's No. 1 problem -- the continued unemployment...Every city has its intelligent, constructive leaders who, once they look into the problem at their doorstep, are likely to put their minds to its solution...Out of the cooperative endeavor in the food-stamp plan may come some new approach to the fundamental problem of distribution, as well as the farm and relief problems..."

Substitutes for Burlap

A billion sandbags, to protect England's civilians and buildings from enemy bombs, have brought boom conditions to United States manufacturers of cotton textiles, acute depression to parts of Hungary, Italy and Bohemia and prosperity to India, says the Wall Street Journal (December 1). England's abnormal need for burlap bags has resulted in soaring prices for jute and burlap. Since the outbreak of the war, raw jute prices have more than doubled with burlap costs showing a like increase. As a result, for the first time in modern textile history heavy cotton cloths are now selling for less than burlap. However, with Great Britain having ordered 1,000,000,000 burlap bags since the outbreak of war, and an additional substantial order expected soon, the supply of jute and burlap is diminishing. At an accelerated pace, burlap is being replaced by cotton sheetings, osnaburgs and other heavy cotton textiles in the manufacture of bags, automobiles, carpets, twine and the other various products in which burlap is used. The paper industry is also benefitting as manufacturers of bags look to a cheaper substitute than the traditional burlap. As industrial recovery in this country has accelerated the need for heavy cloths, the manufacturers of cotton textiles which may be used as a substitute for burlap have sold their production for months in the future, and with prices firm, are enjoying the greatest period of prosperity in several years.

Wallace on Farm Price Adjustments A "modern streamlined version" of the processing tax on farm commodities, nullified by the Supreme Court in its decision on the Agricultural Adjustment Administration, has been suggested by Secretary Wallace as a "possible continuing source of revenue" for farmers' benefits, says an Oklahoma City report to the New York Times. Mr. Wallace spoke before 2,000 farmers, making the first address of his midwestern tour.

He warned that Congress might be unwilling indefinitely to appropriate directly the funds necessary for parity payments to agriculture, and predicted that the European war probably would have little immediate effect on the prices of wheat and cotton.

"Farmers need some continuing source of revenue to provide funds for price adjustments," he said. "There is no assurance that Congress will continue to appropriate money necessary for effective programs for agriculture. Parity payments for cotton, wheat, tobacco, rice and corn were voted at the last regular session by an extremely narrow margin. The farmers finally won, but they may not win next time. Other demands upon the Treasury are growing. More money will be needed for national defense. While these funds, by increasing payrolls, may increase the demands for fruit, vegetables and livestock products, they will add comparatively little to the income of wheat and cotton producers."

As a "modern" version of the processing tax, Mr. Wallace cited the so-called certificate plan, now under discussion by farm leaders. Under the proposal, he pointed out, farmers would receive "production certificates," which processors of farm products would be required to purchase in order to sell their goods. Such certificates, he added, would be equal in value to a certain number of cents per pound or bushel and might be sold by the farmer to the processor. "For one thing," he said. "it might be possible for the producer to cash his certificate at the time he sold his crop. One of the complaints against the present program is the length of time a grower has to wait for his check. And the certificate plan would not require funds from the Treasury."

Mr. Wallace expressed his hope that a majority of processor groups would cooperate in working out sources of revenue for the farm programs, but he added that "die-hards might as well abandon the idea that American farmers are willing to continue to exploit themselves, their families and their land to grow cheap farm products."

Cattle Imports The State Department has made public a proclamation by President Roosevelt allocating a quota of 193,500 head of heavy cattle which may be exported to the United States by Canada during 1940. The proclamation established a quota of 31,050 head for other foreign countries for the same period. The President's action was taken at the request of the Canadian Government in accordance with a reciprocal trade agreement entered into with Canada last year. (Associated Press.)

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Section 1

December 5, 1939

SUPREME COURT

BACKS MILK

PROSECUTION

Anti-trust law controls were further tightened yesterday when the Supreme Court unanimously ruled that enactment by Congress of the agricultural marketing agreement, Capper-Volstead and other farm acts did not give the production and distribution of agricultural commodities immunity from the anti-monopoly statutes, says a report in the New York Times. Chief Justice Hughes wrote the opinion reversing a northern Illinois federal district court which had dismissed price-fixing charges against milk producers, distributors and handlers in the Chicago area. Directly involved was the transportation to and distribution in the Chicago market of milk produced in Illinois, Indiana, Michigan and Wisconsin.

"The Sherman act is a broad enactment prohibiting unreasonable restraints upon interstate commerce, and monopolization or attempts to monopolize, with penal sanctions," said Chief Justice Hughes. "The agricultural act is a limited statute with special reference to particular transactions which may be regulated by official action in a prescribed manner. The agricultural act itself expressly defines the extent to which its provisions make the anti-trust laws applicable. These explicit provisions requiring official participation and authorizations show beyond question how far Congress intended that the agricultural act should operate to render the Sherman act inapplicable. If Congress had desired to grant any further immunity, Congress doubtless would have done so."

HEARINGS ON

PRICE TRENDS

Dr. Isador Lubin, commissioner of labor statistics in the Department of Labor, told the Temporary National Economic Committee yesterday that "if the past is any forecast of the future and if the present European war should unfortunately be prolonged, the United States will be faced with a marked rise in the prices of many important commodities and a subsequent period of painful economic readjustment."

Acting Chairman Borah of Idaho opened the hearings, which will last all week, by explaining this will be the committee's first survey of the general price situation since President Roosevelt asked the committee in September to study price trends following the outbreak of war in Europe. (Washington Star.)

WHEAT KING

Francis Lloyd Wembley, Alberta, was named wheat king yesterday at the international Hay and Grain Show in Chicago. He showed a sample of the Reward variety, weighing 67.3 pounds to the bushel. (A.P.)

S. C. Soil Improvement "Three things are ending the reign of poor land in South Carolina," says an editorial in the Progressive Farmer (December), "soil saving, soil building and soil drainage. In traveling over South Carolina recently we saw much fine work in terracing, checking gullies with kudzu, etc., but the most remarkable demonstration was Master Farmer J. W. Gaston's 'strip-cropping' in Spartanburg County. 'I have been farming 46 years and am just finding out how to stop erosion,' he declared. We wish everybody could see his great hill, sloping down nearly a mile from his barns to the river bottom, once eroded but now fruitful with alternating strips of bale-per-acre cotton and fine lespedeza, each 'strip' being the distance from one terrace to the next. 'My simple rule,' says Mr. Gaston, 'is a rotation of grain and lespedeza followed by cotton. There is no longer any soil-washing, or water run-off....and with less fertilizer needed, cotton yields are nevertheless increasing every year.'"

Purebreds for Scrubs A pedigreed Hereford was given away recently by the New Orleans stockyards in cooperation with the Association of Commerce in a drive to promote blooded stock on the range and higher income for the farmers. Each farmer who brought a scrub bull to the stockyards for sale was given a chance on the bull. The idea is to get rid of as many scrubs as possible and replace them with pedigreed animals. The contest will be repeated every three months. The first drawing resulted in farmers bringing approximately 1,000 scrub animals to the packing plant. Livestock men, in an educational program through the cooperation of the newspapers and the county agents, pointed out that calves sired by a pedigreed bull will bring twice as much as those from a scrub animal. (Southern Agriculturist, December.)

Drought Tests "The prolonged drought in the Tennessee Valley
TVA Power this autumn has confronted the Tennessee Valley Authority with its first major operating test since its establishment in 1933," says Russell B. Porter in a Knoxville report to the New York Times. "With only five of the proposed ten dams completed, and with a heavy load acquired in the purchase of the Tennessee Electric Power Company properties, the Authority finds itself faced with a decrease in the combined supply of hydroelectric power. The cheap rates, a campaign to increase the use of rural electricity and the wartime stimulus to the demand for energy from chemical and aluminum industries have combined to enhance the demand...TVA power engineers say that the dry weather can continue until in January, without causing imminent danger of a shortage..."

Southern
Forests "A fact not commonly realized is that 26 pulp and paper mills in the lower South own and have under protection and some degree of management approximately three million acres of forest land," says W. S. Stover, of the Forest Service, in an article in the Southern Pulp and Paper Journal (November). "Through a forward-looking policy they are giving a marked impetus to better forest land management in the region; other industries depending on the forest for their raw material should adopt similar policies if they expect to maintain their position. Much progress in forestry has already been made in certain sections of the lower South where a profit incentive exists because of a diversified demand for material for lumber, veneer, cooperage, cross ties, poles, piles, pulpwood, etc., and for use in naval stores operations, grazing, hunting preserves, etc. Other parts of the region, equally favored as regards the productive capacity of the soil, are still in the Dark Ages so far as forestry is concerned because they are forced to rely on the inadequate and uncertain requirements of a small sawmill industry..."

1939 Grain The quality of 1939 wheat, barley and grain sor-
Quality ghum is somewhat higher than in 1938, though the quality of oats and rye is lower, the Agricultural Market Service states in its November report. The report is based on inspected receipts at representative markets from July through October 1939. More recent reports of wheat marketings indicate a considerable increase in the number of cars graded "sample" because of storage damage, must and heating. A marked increase in the number of cars of both hard and soft winter wheat grading "weevily" also has been noted. (The Northwestern Miller, November 29).

Trucking Trends in trucks are toward lower limits in size
Regulation and greater uniformity in state requirements, says Business Week (December 2). Secretary Ickes' proposal that operation of trucks be curtailed on Sundays and holidays now is embodied in the laws of several states. South Dakota and Nebraska restrict the operation of oil trucks on Sundays and holidays. Minnesota and Wisconsin curtail truck traffic during week-end peak periods. The Interstate Commerce Commission is bringing out a series of reports on the trucking problem. The first, out last month, presented a complete analysis of state regulatory requirements. A second report will cover the present use of highways and will be based on surveys by the Public Roads Administration in cooperation with state highway commissions. A third report will discuss safety factors -- the effect of height on the center of gravity, the effect of length on curves and on passing. Finally, the ICC will submit to Congress its recommendations for any legislation deemed advisable.

Hay Curing by Electricity "Electricity has been used for many things but now comes its use to cure hay," says C. E. Wylie, Tennessee Experiment Station, in Rural Electrification News (November). "...About 4 years ago experimental work on hay drying started at the University of Tennessee, as part of the rural electrification program of the Tennessee Valley Authority, by J. W. Weaver, Jr., and John A. Schaller, agricultural engineers...Equipment for blowing air through the hay after it is stored in the barn consists of an electric motor, a blower, and wood air ducts on the floor of the hay mow.

"...The results of drying hay by this method have demonstrated that hay may be sufficiently dried in the barn by the use of forced air. This has been accomplished not only at two places operated by the Tennessee Experiment Station but on private farms. The resulting hay has been more palatable than field-cured hay from the same field. Such hay also has a greener color and a higher carotene content than hay cured in the field. Feeding trials with dairy heifers and other livestock have shown that this hay had been well preserved.

"...The initial installation of this equipment includes electric motor, a blower, and the construction of the wood air ducts. All these have been charged up at actual cost and have totaled approximately \$400 for the installation. The electricity required in operating the motor is about the only expense of operating...The cost is approximately \$1 per ton for drying hay in the barn...A complete report describing this method of hay drying, the equipment, and its operation is now in progress of publication in bulletin form. This will soon be available by addressing requests to the Tennessee Experiment Station, Knoxville, Tennessee."

Potash from New Mexico Potash fields near Carlsbad, N.M., will go into production before next summer, the International Agricultural Corporation said recently in announcing plans for plants and equipment there. The development, first to produce potassium sulphate direct from native ores, is expected to yield 70,000 tons of sulphate a year plus an equal tonnage of 60 percent muriate of potash. The United States produced only 55 percent of the potash it consumed this year, and papermakers have been complaining because no domestic supplies of bleached sulphite were available. (Farm Journal and Farmer's Wife, December.)

Food Stamps Secretary Wallace has announced selection of San Francisco, California, for the food stamp plan. The population of San Francisco is about 750,000 with 37,000 relief cases, representing some 70,000 individuals.

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Section 1

December 6, 1939

HULL, WALLACE Secretary Hull defended his reciprocal trade agree-
ADDRESS AFBF ments in an address last night before the annual convention
CONVENTION of the American Farm Bureau Federation, says a Chicago re-
port to the New York Times. Mr. Hull maintained that the
only alternative to the trade agreements program which its opponents of-
fered was a return to the "Hawley-Smoot embargo policy, or its equivalent."
He belittled the criticism that the trade agreements had increased im-
ports competing with domestic agricultural products. Of the "\$795,000,000
worth of agricultural or so-called agricultural products" imported in the
first nine months of this year, Mr. Hull said, \$530,000,000, or two-thirds
of the total, represented coffee, rubber, raw silk, bananas, cocoa beans,
tea, carpet wool, sisal and other non-competitive products already on the
free list.

Secretary Wallace, addressing an afternoon session, told the farmers
that "other classes of society" in the last 20 years had increased their
share in the national income at the expense of the farmer. He added: "It
would seem to be a positive duty for organized agriculture to fight ever-
lastingly for an increased share until such time as a fair share has been
obtained." The Secretary said that close scrutiny of the Federal budget
necessitated by world rearmament would bring farmers face to face within
the next few months with the question which he used as the subject of his
address, "How Permanent Is the Farm Program?" After mentioning the vari-
ous proposals to raise revenue to finance the farm program, Mr. Wallace
said: "The important thing is that the representatives of farm organiza-
tions and the different commodity groups get together on whatever plan or
combination of plans they intend to present to Congress. In this critical
time, when the entire farm program has been placed in jeopardy, farm soli-
darity is more than ever essential..."

Edward A. O'Neal, president of the federation, contended that indus-
try and labor, not agriculture, were responsible for the philosophy of
scarcity which was keeping national income below prosperity levels. De-
fending the Administration's program of control and benefit payments, he
asserted that its failure to raise farm income to parity was attributable
to "restrictive policies" of other groups. Mr. O'Neal held that agricul-
ture could not attain its goal of parity "until industry produces more
and sells it at the lower prices which increased production will permit,"
and until labor puts less emphasis "on high hourly wages and more on in-
creased and sustained employment."

Rancidity
Prevention

Discussing the prevention of rancidity in foods, Betsy M. Watts, of the California Experiment Station, says in the Journal of Home Economics (December): "In 1937, Peters and Musher described the antioxygenic properties of cereal flours, particularly oat flour. Not only did oat flour greatly retard rancidity in fats and fatty foods, but it was, of course, also edible, bland in flavor, and neutral in color...Wherever it has been tried, it has apparently been successful in retarding rancidity; in some cases the amount of retardation has been quite remarkable.

"Lowen, Anderson, and Harrison found it effective in retarding oxidation and off-flavors in fish-liver oils. Conn and Asnis increased the keeping qualities of potato chips by sprinkling the flour over the chips while still hot. They also described the preparation of parchment paper wrappings, wax paper, etc., containing a certain proportion of oat flour which could be used to prevent the development of surface rancidity in all types of packaged foods. Bull retarded rancidity in bacon and other pork products by using 10 percent oat flour in the curing mixture, also less efficiently by using the specially prepared wrappers. Triebold improved the keeping qualities of crackers by spraying them with oat flour. Dahle and co-workers found that the addition of a water extract of oat flour to cream to be used for butter-making gave ample protection to the butter over two month's storage. It not only prevented oxidation of the butterfat but also retarded the development of oxidative off-flavors such as staleness and cheesiness.

"The possibilities are by no means exhausted. For example, the chemical nature of the compound present in oat flour responsible for its antioxygenic properties has not as yet been determined. It is quite possible that a much greater degree of protection could be secured by using a more active fraction of the flour..."

Year-Round
Turkey Market

"Thanks to new packing and freezing methods in this country the large turkey supply this year will be absorbed without breaking the market severely," says an editorial in the Great Falls Tribune. "...The idea has spread rapidly in recent years that the great bird which is the central feature of the Thanksgiving feast is also a delightful addition to the festive dinner at any time of the year. Marketing agencies and growers began to develop more varied types of fowl than the enormous gobbler that could only be consumed by a large family or community gathering.. New developments in storage have made it possible to carry a supply of the birds in the markets the year around in good shape. With those changes storage is no longer the haphazard accumulation of unsold Christmas supplies but the planned purchase of a year's supply...In all sections of the country flocks of turkeys have increased greatly in number on the farms and ranches until wider outlets have become necessary if they are not to become a drug on the market. Modern storage methods are providing those wider outlets for them."

Bovine T.B. Testing Farm and Dairy (December 1) commenting editorially on the recent announcement by the Department that every herd of cattle in the country has been tested at least once for tuberculosis, says: "Taken only at its face value, that announcement represents a great physical task completed, considering the tremendous number of cattle in the United States. However, this announcement represents an even greater accomplishment. Those who can remember when T.B. testing of cattle first started can recall the suspicion with which the move was met by most farmers. To them it was merely another hairbrained governmental scheme to give some more jobs to some deserving political workers and it would mean the loss of some good cows to the farmers. Gradually, that suspicion was allayed. Today, farmers everywhere expect, and in many cases demand, T. B. testing of their herds. They realize that eradication of this disease, which now appears certain, is highly important. We trust that some day the announcement can be made in regard to the eradication of Bang disease."

Cotton Export Program The Department of Agriculture has reported sales of cotton and cotton products under the export subsidy program that amounted to 4,332,000 bales between July 27 and November 30. This volume included products equivalent to 215,000 bales. The Department said the cotton actually shipped out of the United States from the beginning of the 1939 marketing season, August 1 to November 30, was 2,266,000 bales, compared with 1,528,000 in the same period in 1938. Exports in November were reported at 623,000 bales, compared with 438,000 in November of last year. (A.P.)

Trespass Patrol "You get written permission from any one of the 160 New Jersey farmers in the Sergeantsville Farmers' Protective Association, Inc., you don't hunt, or else you get arrested," says Farm Journal and Farmer's Wife (December). "Each member pays a dollar a year. Printed signs and permit cards are provided. During hunting season a deputized sheriff, paid from association funds, ranges the roads and challenges hunters to display their permissions. About 25 arrests a year are necessary to convince lawbreakers that trespassing with dog or gun is illegal..."

R.R. Car for Frozen Foods Quick frozen foods may be shipped in a new thermostatically controlled refrigerator car which will maintain a uniform 0 degree temperature for four days without icing in transit, reports Food Industries (December). The refrigerant is solid carbon dioxide.

Egg Trading All November records for egg futures trading were broken on the Chicago Mercantile Exchange last month, L. S. Tenny, business manager, has reported. Transactions involved 91,968,000 dozens, compared with 89,472,000 dozens in November 1938 and a 10-year average of 63,480,000 dozens. (Press.)

Reclamation Water storage on Federal Reclamation projects
Water Storage during the past 6 years has increased more than
 fivefold. This storage serves purposes of irrigation,
flood control, city water supply, and generation of power. Since
1933, when 46 reclamation reservoirs held 7,000,000 acre-feet of water,
storage has risen until it is now well over 35,000,000 acre-feet or
11,000,000,000,000 gallons. The tremendous increase is largely the
result of 24 new reservoirs, including Lake Mead on the Boulder Canyon
project, the largest body of water ever stored behind concrete by man.
Boulder Dam now holds back nearly 25,000,000 acre-feet of water. Aside
from Boulder, the largest amounts of water stored on Reclamation pro-
jects at this time are at the Minidoka irrigation development in Idaho
where 3 reservoirs hold 2,300,000 acre-feet; the Rio Grande development
in New Mexico-Texas, where 2 reservoirs contain 1,150,000 acre-feet; and
the Yakima development in Washington, with 5 reservoirs and 1,000,000
acre-feet. Conservation of the country's water resources has shown
constant growth since establishment of the Bureau of Reclamation by the
Congress 37 years ago. (The Reclamation Era, November.)

Refrigeration New developments in domestic refrigerators are
for the Farm meeting farm requirements, says R. R. Parks, University
 of Illinois, in Quick Frozen Foods (November). "By
separating the refrigerator into two compartments, one space is now used
for freezing exclusively, with very little air movement in it. The re-
sult is more uniform temperatures for any predetermined setting, and
also a minimum of frosting on the freezer unit, due in part to lack of
air movement and also to less air volume to control. The other compart-
ment is also better managed because the cooling coils are now flat
against the back, more uniform temperatures can be maintained, more
usable space is available, and higher coil temperatures mean less dehy-
dration. There are at least three commercially built domestic freezer
refrigerators now available on the market. The operation cost is approx-
imately twice that of the smaller units without the freezer advantage...
Next in order with this development comes a large, home-built walk-in
type refrigerator storage room containing a freezer or 'zero' compart-
ment. The University of Washington has been the principal contributor
in this direction. Their last reported experimental unit, built and
used on a cooperating farm, is a 7'x8'x6½' walk-in room held at 35°,
inside of which is a 2½'x2½'x7' top opening compartment held at zero
degrees...The materials cost on the complete unit was \$325 (including
labor)...The unit required 78 kilowatt hours in August against 36 in
January, and an average for the half year of 53 k.w.h. month..."

DAILY DIGEST

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Section 1

December 7, 1939

EVER NORMAL GRANARY

Grain prices would have skyrocketed as a result of the war in Europe had it not been for the stabilizing effect of the ever normal granary of the Agricultural Adjustment Administration, R. M. Evans, AAA Administrator, declared yesterday at the Northeast Regional Conference of the AAA. The meeting was attended by 200 farmers representing AAA county committees in nine Northeastern States, agricultural colleges and state departments of agriculture.

"In stabilizing supplies, the AAA program is a consumers' program as well as a producers' program," Mr. Evans said. "The ever normal granary means an ever full, but not wastefully overflowing granary. Northeastern dairy and poultry farmers are on the consumers' end with respect to grain. The ever normal granary offers them double protection. When grain prices are ruinously low, farmers in the West are forced into dairying and poultry in competition with you. With war in Europe, there is no doubt in my mind that grain prices would have skyrocketed had it not been for this steadying effect of reserve supplies held by farmers in the ever normal granary." (New York Times.)

TRADE BARRIERS STUDIES

The Works Projects Administration has begun a study of statutes impeding the free flow of commerce between nine Eastern and Southern States and the Inter-Departmental Committee on Interstate Trade Barriers met yesterday to begin consideration of the same problem.

The WPA study will be made by its marketing laws survey project, with the intention of collecting the data in time for presentation to the legislatures of the surveyed states when they meet in January. The laws to be studied are those of New York, New Jersey, Massachusetts, Rhode Island, Virginia, Kentucky, South Carolina, Mississippi and Louisiana.

The inter-departmental committee, at its first meeting, discussed methods of presenting testimony on its subject in hearings which it hopes to obtain early next year before the Temporary National Economic Committee. Paul E. Truitt, chairman of the committee, said numerous associations and groups had offered to aid in presenting such evidence.

Don Montgomery, Agriculture Department Consumers' Counsel, suggested that the committee seek the aid of large consumer organizations in fighting the interstate trade barriers, holding that their interests are the most seriously affected by such barriers. (New York Times.)

Better
Nutrition

In a paper in the Journal of the American Dietetic Association (December) on international and national aspects of the campaign for better nutrition, Frank G. Boudreau, of the Milbank Memorial Fund, says in part: "We need to know much more about the nutrition of our people than we know today. I feel sure that research laboratories will continue to pour out the multitude of observations needed to enlarge our knowledge of the science of nutrition. It is in applying the science that we have fallen behind. We have no such accurate knowledge concerning the problem of human nutrition as we need to wage an effective campaign. We require more carefully worked out dietary surveys to locate the undernourished and to show the public that a real problem exists. We need to work out a practical system of appraising human nutrition by using the new biochemical and physiological tests and perfecting them for mass use.

"Our doctors in training need better instruction in biochemistry and dietetics and our health officials require better courses in applied human nutrition. Public health nurses, too, need better training in nutrition. The subject needs to be integrated into the public health program, and not left to the nutritionist alone. We need more and better nutritionists and dietitians and better support and understanding of their work. Our methods of nutrition education require testing to see if they are effective and economical.

"It is my hope that our government may see fit to set up a national nutrition committee, composed of leaders in nutrition, agriculture, economics, transport, administration, marketing, labor, etc., which will set a high standard for the whole country, and coordinate our national policies to bring about better nutrition and a higher standard of living..."

Paper Milk
Containers

"Three years ago paper containers for the domestic delivery of milk formed the center of discussion in several places where, because of regulations, vested interests, and perhaps prejudice, obstacles were placed in the way of their adoption," says an editorial in Industrial and Engineering Chemistry (December). "The paper container again comes to the fore, being the subject of an editorial in the New York Times and winning preferred space on the front page of the Wall Street Journal, because through its use it is hoped that a difficult problem confronting New York City may be solved. There has been a demand for cheaper milk with better prices for the farmer...It now appears that the paper container of 2-quart capacity will enable users to save 1.5 cents a quart. Thus we see applied science doing something that so directly affects the consumer that he can scarcely avoid realizing his obligation. It has taken time and costly research to perfect this fiber paraffined container, and its value is just being realized...In addition to the lowered price which seems possible, the experiment, if successful, should bring other advantages to the consumer. It will be watched with interest in many parts of the country..."

Weather and Crops Light to moderate showers, in some sections fairly heavy rains, materially benefited the topsoil and supplied sufficient moisture for present agricultural needs in most places over considerable interior and southwestern areas, says the Weekly Weather and Crop Bulletin. These include Louisiana, most of Texas, south-central and eastern Oklahoma, Arkansas, eastern Kansas, Missouri, southeastern Nebraska, Iowa, extreme southeastern Minnesota, and most of the Lake region and Ohio Valley. While the topsoil was benefited in these sections, rainfall was not sufficient to penetrate to any considerable depth. The subsoil remains dry generally throughout the interior of the country, with complaints of wells failing and a continued shortage of stock water in a good many places. The drought situation continued serious over most of the western half of the country. Some drifting soil was reported in South Dakota and Wyoming. There was sufficient rainfall during the week to improve the outlook generally in central and eastern portions of the Winter Wheat Belt.

Decision on Milk "The unanimous decision by which the Supreme Court held that milk handlers in the Chicago marketing area are amenable to prosecution under the Sherman Anti-Trust Act is looked upon by the Department of Justice as a powerful weapon in the fight on illegal restraints in the agricultural industry, and unquestionably it is," says an editorial in the New York Times (December 5).

"Brushing aside the plea for immunity from criminal proceedings advanced by producers, distributors and others of the half-hundred defendants on the ground that power to regulate the marketing of milk and other agricultural commodities had passed to the Secretary of Agriculture by virtue of farm legislation, the court, emphasizing that this regulatory program must follow a specific pattern, in one brief sentence set forth the principle underlying its decision: 'Farmers and others are not permitted to resort to their own devices and to make any agreements and arrangements they desire, regardless of the restraints which may be inflicted upon commerce.'

"...The immediate effect of the Supreme Court decision is to reinstate the case in the lower court, and undoubtedly, many months will elapse before the success or failure of the prosecution is determined. This does not, however, serve to detract from its importance to the Government, which now is given certain unquestionable rights in combatting monopoly, and will be able to shape its course accordingly."

N.Y. Farm Motor Plates New York's \$1 "bargain" license plates for convenience of farmers using motor vehicles on their property will undergo their first test next month. Carroll E. Mealey, State Motor Vehicle Commissioner, said the plates, approved by the 1939 Legislature, permit farmers to operate farm vehicles on highways but only to reach another part of their property. Violators of the provisions, he said, will lose their plates. (A.P.)

Sweet Potato "Sirup From Sweet Potato Starch" is the title of an
Starch Sirup article by L. E. Stout and C. G. Ryberg, Jr., of Wash-
 ington University, in Industrial and Engineering
Chemistry (December). Reporting experiments, the authors conclude:
"The results obtained in this work indicate that sweet potato starch
does not differ greatly from cornstarch in its behavior to dilute
mineral acid under pressure. They also indicate that a sweet sirup
can be prepared from sweet potato starch that is comparable in appear-
ance and flavor to cornstarch prepared under similar conditions. The
conditions required for the production of sweet potato sirup do not
differ greatly from those required for the industrial conversion of
cornstarch."

Farm Machine "After running behind the preceding year every
Industry month since late in 1937 sales of farm implements began
 to record improvement in July and August and in the
past three months have been showing one of the sharpest year-to-year
gains on record," says a report from the Wall Street Journal Chicago
Bureau. "One company reports its sales in October were better than 75
percent ahead of the same month last year and, with the exception of
1937, compared favorably with any other October in its history. While
the industry is encouraged by the recent improvement it is not taking
this betterment as a positive indication that volume in the 1940 fiscal
year will be much larger than in the year closed October 31. Prospects
appear favorable for the next few months but the long-term outlook is
clouded...Part of the increased demand in the past three months un-
doubtedly reflected the upturn in farm income in September and October.
In addition, however, there has been some forward buying, by farmers
as well as dealers, because of the possibility of an advance in selling
prices early in 1940..."

Cotton Export Effective December 6, a reduction in the rate of
Subsidy Cut export subsidy payments on lint cotton from $1\frac{1}{2}$ cents
 to $\frac{3}{4}$ cent a pound was announced by the Department of
Agriculture. Equivalent reductions will be made in the subsidy pay-
ments on exported cotton goods. The present subsidy rate became effec-
tive on July 27. "The sales for export to date under the program have
been very satisfactory," Mr. Wallace commented, "and the apparent
present export demand indicates probable continued favorable export
sales with the reduced payments. The reduction in payments will make
possible continuation of the program for a longer period with the
available limited funds. It is thought that this will result in great-
er total exports than would be possible if the present rate were kept
up until it became necessary to discontinue the program entirely." (Press.)

DAILY DIGEST

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Section 1

December 8, 1939

A.F.B.F. BACKS TRADE PACTS

By resolution the Farm Bureau Federation approved yesterday Secretary Hull's trade agreement policy. The resolution, one of more than a score adopted by the farmer delegates from 48 states, said:

"In giving our support to the continuance of reciprocal trade agreements, we renew, with increased emphasis, our demand that no agreement be consummated, the effects of which might be to force or hold domestic prices for any farm commodity below parity level. Any other course would justify condemnation of and opposition to such agreement by all agricultural groups.

"We further insist that in the negotiation of trade agreements economic factors be given consideration equivalent to the weight accorded to the factors of diplomacy and statecraft. To this end we urge that the reciprocal trade act be amended to provide that no agreement be consummated unless unanimously approved by the Secretaries of State, Commerce and Agriculture."

President Edward A. O'Neal, who had headed the farm bureau since 1931, was re-elected for another two-year term. (New York Times.)

COTTON EXPORT SUBSIDY CUT

Secretary Wallace announced last night that the export subsidy rate on cotton would be reduced from 75 to 40 cents per hundred pounds, effective at 12:01 a.m. today, the second reduction in two days.

Wallace, who announced the cut after a conference with six leading exporters from the South, warned that a shortage in funds might force further reduction, or even abolition, of the subsidies which had been paid at a rate of \$1.50 per hundred pounds from last July 27 to December 6, when the 75 cent rate was put into effect.

He pointed out that the question of funds, together with "the strong foreign demand" for cotton, had led him to impose the cut. (United Press.)

WHEAT, FLOUR EXPORT PLAN

The Department announced yesterday that contracts were made during the 5-month period July 1 through November 30 for the exportation of 22,701,431 bushels of wheat under the Department's wheat and flour export program. This total includes contracts made during October and November for the exportation of 5,966,044 bushels. In view of the uncertainties brought about by the European situation and drought conditions in some wheat-producing areas in this country, the program is being operated on a conservative basis.

Government at "The Government At Your Service," by Archie
Your Service Robertson, is announced as an unofficial handbook of
Federal services to individuals and how to get them.
The author has since joined the Department as a writer. His handbook
arranges the Federal services by classes of citizens who can use them
rather than by departments or agencies.

The following discussion of soil erosion is addressed to city
readers: "The next time you drive through a country settlement of
tarpaper shacks, before nudging your companion to say, 'Look at those
shiftless farmers -- bet they're on relief,' slow down for a look at
the soil. The chances are you will find it cracked, perhaps washed
bare in spots with subsoil showing through, and an old Ford lying in
a gully. Then look back at the people. If you were in their place,
you couldn't support yourself on that soil, either. 'Erosion,' is
from the Greek word meaning 'gnawing away.' Out of 600,000,000 acres
of American farms, some 50,000,000 have been skinned raw, so that no
dirt remains on which crops will grow. Of course, these farms are
mostly abandoned. Another 50,000,000 acres are almost gone. Another
100,000,000 acres, still cultivated, are being seriously impoverished,
along with their people. The strange thing is, we have all seen it,
without knowing. A steep cornfield suggests the joke about the moun-
tain mule with legs shorter on one side than the other. It ought to
suggest the national debt, because the topsoil may be running down the
hillside at a rate which will add another family to the relief rolls
within five years. Nor do we notice the rivulets racing down from the
plowed slopes and cut-over forests to choke power dams with mud, kill
fish in the rivers, and flood our cities."

Of particular interest to Department people are Chapter VII, Using
Land and Water (Part 1, Conservation; Part 2, Recreation) and Chapter
VIII, The Farm Government. The Government can also help you, says the
author, if you want a market for products, loan, free clinic, low-cost
home, free map of forest or park, advice on child care, information on
forming a cooperative -- and many other things.

New Small Starting with 12-foot harvestors, the sizes avail-
Harvestor able have come down to meet power trends until at last
harvest farmers could get them as small as 6-foot cut,
says Farm Implement News (November 30). Now there is a new and still
smaller harvester ready for 1940 harvests. It is designed to be both
hauled and powered by light tractors known as "two-rows." This new
harvestor has a scoop-shovel front end, right-hand cut. Instead of the
cut grain being delivered by a spiral and passing back to the cylinder,
there is a simple inclined canvas passing around rubber-covered rollers
top and bottom and delivering the cut grain from the knife edge right
to the cylinder suction. The cutterbar is 60 inches wide. There is a
9-inch gather so that the full swath is 69 inches. The harvester is only
10'6" high over the elevator, 19'6" long, 8'11" wide and weighs 2,400
pounds.

"Pressure
Groups"

"Addresses delivered at the annual convention of the Farm Bureau Federation in Chicago again afford striking proof that our warring interest groups divide mainly over the means to the end and hardly at all over the end or ends to be achieved," says an editorial in the Wall Street Journal (December 7). "Yet the pressure groups of farmers, laborites and capitalists fight one another continuously, for all the world as though their several purposes were irreconcilable. The result is about as little of real cooperation as could be imagined among factions which cannot, in the long run, prosper independently but must rise or sink together."

"At the Chicago meeting, Edward A. O'Neal, president of the Federation, correctly said that agriculture could not attain its purpose 'until industry produces more and sells it at the lower prices which increased production will permit' and labor 'puts less emphasis on high hourly wages and more on increased and sustained employment.' What the two Cabinet members (Secretaries Wallace and Hull) and President O'Neal of the Farm Bureau Federation said at Chicago must have helped toward a general understanding of the 'farm problem' if it impressed upon those who heard or read the speeches of the concluding session these pertinent facts: (1) that no interest group in the country ^{can stand apart from the country} as a whole; (2) that no legislative or economic formula which deals with a single group interest can by itself raise the national income or insure general prosperity; (3) that all these groups must prepare to make concessions from their demanded programs, even to accept immediate sacrifices, knowing that their proposed means must be reconciled one with another if the common objective of a fairly diffused and greater prosperity is to be attained. In a sense, we are all farmers, all wage workers, all capitalists together."

Cottonseed
Standards

"Prior to the adoption of cottonseed grade standards that have been established by the Department of Agriculture one wonders how it was possible to determine what cottonseed was worth," says an editorial in Oil Mill Gazetteer (November). "The mill manager had to guess how many pounds of oil he would get from a ton of seed, how many pounds of cake and meal, and how many pounds of linters...Most farmers would be surprised to know how many lots of cottonseed, sold to the oil mills, contained from 400 to 600 pounds of water per ton of seed, and how many lots, from 60 to 600 pounds of plain dirt, trash, sticks, stones, boll shucks, etc. But guess work as to the value of cotton seed is no longer either necessary or good practice. Everyone now knows what the base grade stands for and how much oil, cake, meal, linters and hulls base grade cottonseed contain..."

Toward Security "A few months ago we were extended the privilege of the company of a state director of the Farm Security Administration in visiting clients of that organization in an important agricultural county," says an editorial in the Progressive Farmer (Ga.-Ala.-Fla. edition, December). "...It's the method used that draws us to the Farm Security Administration. While each case was treated individually, the basic plan followed was to extend help in such way that a family could start from taw and ultimately own their own land. It was recognized that farm people want nothing given to them that isn't theirs. All they ask is a chance. The chance was given in the form of credit and expert supervision.

"Even though the money advanced was for the purchase of equipment, the first requirement exacted of the borrower was his agreement, first to produce his own food and feed requirements before providing for cash crops from which the loan could be repaid...On our visit we saw good gardens and pantry shelves stacked full of good things to eat properly canned and put away for the fall and winter days.

"Our experience in the past has been for the most part with a credit system in which the first requirement was a committal as to expected returns from cash crops. In reversing this and putting food and feed first the Farm Security Administration is establishing in the minds of its clients one of the first principles of sound farm management. That the plan is sound is proved by the high percentage of collections they are able to report....We think most highly of the Farm Security Administration approach. It's a great lead in the direction of farm security."

Training Farm Leadership "M. L. Wilson, Under Secretary of Agriculture, recently delivered an address in which he stressed the important part the old town meeting discussion groups played in developing the early leaders of the Republic," says an editorial in the Progressive Farmer (Ga.-Ala.-Fla. edition, December). "He deplored the fact that cross section groups composed of people of many classes no longer meet together to discuss the general welfare in which they all share. Nowadays 'people's loyalties are clustered around their particular occupational groups,' he said. There is meat in what Mr. Wilson suggests. Undoubtedly there is a real need for groups to take counsel together on a real community basis. Farm people should meet together frequently and regularly for an exchange of ideas. There should be a discussion leader (a farmer) who has prepared himself for the occasion, and perhaps experts should be invited in for consultation only, but the heart of the meeting should be free and informal discussion by farm people themselves..."

Food Stamps Portland, Oregon; Macon, Georgia; and Akron, Ohio, have been selected for the food stamp program, Secretary Wallace has announced.

DAILY DIGEST

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Section 1

December 11, 1939

GROWERS VOTE

COTTON QUOTA

Secretary of Agriculture Wallace last night hailed as a victory for "orderly marketing methods" the overwhelming vote by the nation's cotton producers in the referendum to continue marketing quotas on next year's crop, says a United Press report. Returns from more than 800,000 producers early last night showed that 91 percent of them favored the quota arrangement.

RECORD IN

SOYBEAN SALES

Speculative interest in soybeans is unusually large and a new high record for a single day's turnover on the Chicago Board of Trade was established Thursday, says a report to the New York Times. It is estimated that all records for a week's business were shattered last week, as sales averaged about 1,000,000 bushels daily. Commission houses and speculators were active buyers. Current prices are regarded as most satisfactory from a producer's standpoint and some sales were made at equal to \$1 a bushel at Illinois country loading points.

MILK TANK

TRANSPORTATION

The first transportation of milk utilizing a new system of rail truck coordination which eliminates the necessity for pumping the milk into a tank truck at railroad terminals took place last night, says a report in the New York Times, when a dairy company delivered a 4,000-gallon tankload from its creamery at Munnsville, New York, by rail to Weekawken and then by truck to its pasteurization plant in New York City. The new equipment permits the tank to be transferred mechanically from the flat car to the truck by push button control in 90 seconds.

OCTOBER

EXPORTS

Expansion of exports to Canada, Latin America and to the Far East in October was chiefly responsible for an increase in total United States exports in that month to \$332,080,000, the highest monthly figure in two years, the Commerce Department has announced. Exports to each of these areas has expanded considerably since the outbreak of the war. General imports for the month totaled \$215,281,000, compared with \$178,024,000 in October last year. (Press.)

Hereditv in In an editorial on hereditv in infectious diseases,
Infection the Journal of the American Medical Association
 (December 2) says in part: "Assuming the fact that in-
herited factors are of basic importance in determining the character
of infection in both the individual and the herd, present interest is
principally focused, according to Webster (Webster, Leslie T.: Hereditv
in Infectious Disease, J. Hereditv 30:365 (Sept.) 1939) on the methods
of modifying the expression of these factors through environmental ones.
Of those tested so far, diet is the most important and has been proved
capable of changing susceptibles to resistant and vice versa. Indeed,
epidemics may be started and terminated merely by altering the dietary
factors. Even if only a few of the implications of these experimental
studies can be applied to human conditions, the effect on medical
thought may be revolutionary. The part which inherited disposition in
resistance to infectious disease may play is highly important. A sig-
nificant element may also be introduced into the understanding of many
phases of human epidemiology. Finally the alteration of what appears
to be a hereditary character by such environmental factors as diet may
exert an unpropheable effect on the course of many human activities.
Indeed, even though the results of these studies cannot as yet be ap-
plied to man, they should serve to stimulate new lines of thought."

Fewer Farm A marked decline in farms lost through foreclosure
Foreclosures in the last five years, a continuance in the decline of
 farm-mortgage debt and an increase in voluntary sales
as farm values rose, have been reported by the Department of Agriculture.
In the year ended on March, 1939, forced sales and related defaults
caused 16.8 percent per 1,000 of all farms to change hands, compared
with 17.4 percent in the previous year and 28.3 percent in the year
ended on March 1, 1935. Forced sales because of tax delinquency were
3.4 per 1,000, compared with 7.3 per 1,000 in 1935. Forced sales for
each 1,000 farms ranged between 12 and 14 percent in the New England,
Middle Atlantic, East North Central, South Atlantic and East South
Central States in the last year, but ranged up to around 25 for 1,000
in the West North Central and Mountain States. (New York Times.)

New Paper New fabrics woven of paper for the bag trade and
Baggings for use in flour coverings, developed as a result of the
 rapid rise in burlap prices since the beginning of the
war, are likely to find permanent places even if burlap prices return
to their prewar level, it was said last week at the exposition of the
chemical industries in New York. Woven paper has been used for some
years in making loose bags for packing oranges, apples and similar prod-
ucts. Stimulated by high burlap prices, producers have in the last two
months developed new constructions, and some of these were said to be
stronger than burlap and useful because they stay in place and will not
stretch out of shape under stress. (Press.)

Soil Moisture The Division of Agricultural Statistics has completed its 1939 fall tests of the depth of soil moisture in fields seeded to winter wheat in Kansas and Nebraska. The tests, inaugurated on an experimental basis in these two states in 1938, are made twice each year along routes covering approximately 7,000 miles. Data relating to depth of soil moisture are expected to be helpful as a supplemental indication of winter wheat abandonment and yield. Experiment station records indicate that a rather close relationship usually exists between the depth of soil moisture at seeding time and the final outturn of winter wheat in the western Great Plains. For several years the statisticians in some of the States in this area have taken measurements of the depth of soil moisture, but the work was not made a definite part of the division's program until last year. (A.M.S. News, December 1.)

Research in A survey made at the Exposition of Chemical Industries in New York recently showed that forty-two typical concerns employed a total of 1,350 research workers, spending an average of \$5,500 per man per year for compensation and operating expenses, Charles F. Roth, president of International Exposition Company, announced. Lowest annual outlay for research in the group was \$2,000, and the highest was \$2,000,000. Some thirteen companies reported budgets for research aggregating over \$6,000,000 annually for a period of years. Mr. Roth said the survey brought frequent emphasis on the fact that process development and engineering share an important place with pure research in industrial development, since economical manufacture is necessary for marketing of new products. (New York Times.)

Blockade "Great Britain has been requested in a note delivered by the American Embassy in London on instructions of Secretary of State Cordell Hull to refrain from applying to American ships and goods her control program for the seizure of all exports from Germany," reports Bertram D. Hulen in the New York Times. "Coupled with the request was a reservation of rights that carried a warning that failure to respect the American position on the Allied blockade of Reich exports might present a basis for claims.

"The United States Government, the note said in conclusion, after presenting the essential facts, 'is therefore under the necessity of requesting that measures adopted by the British Government shall not cause interference with the legitimate trade of its nationals and of reserving meanwhile all its rights and the rights of its nationals, whenever, and to the extent that they may be infringed.'..."

Cotton Use, Manufacturers Record for December contains the following articles: "Cotton's Uses in Relation to Housing and Construction" by C. K. Everett of the Cotton Textile Institute; and "Chemurgic Plastics" by R. D. McMillen of the Farm Chemurgic Council. Photographs with the articles illustrate work of the Department.

Cotton Crop The Department of Agriculture has reported that
Estimates this year's cotton crop was 11,792,000 bales of 500
 pounds gross weight each. The forecast a month ago
was for 11,845,000 bales. Production was 11,943,000 bales last year,
18,945,022 in 1937. The average for ten years, 1928-37, was 13,800,000
bales.

Yield of lint cotton this year was reported as 235.9 pounds to the
acre, compared with 235.8 pounds last year, and 190.8 pounds the 1928-37
average. Acreage of cotton in cultivation on July 1 was reported as
24,832,000, and that left for harvest was 23,928,000, compared with 25,-
018,000 and 24,248,000 last year, and 34,090,000 and 33,623,000 in 1937.
Abandonment of acreage between July 1 and harvest this year was 3.6 per-
cent, compared with 3.1 percent last year.

The Census Bureau has reported that 11,111,589 bales of cotton of
this year's growth had been ginned to December 1, compared with 11,230,-
522 a year ago, and 16,175,505 two years ago. The Bureau reported gin-
nings to December 1 included 164,932 round bales, counted as half bales,
compared with 151,222 a year ago, and 287,319 two years ago. (A.P.)

Cooperative Frank C. Edminister, of the Soil Conservation Service,
Game Plans addressing a recent meeting of the New York State Conser-
 vation Council, advocated replacing farmer-sportsman co-
operative game projects with soil conservation districts which combine
game management with erosion, flood control and other protective measures,
says a Troy report by the Associated Press. Mr. Edminister called present
cooperative systems "over costly and unsound" because the State does
most of the work while hunters "do little but pay through their hunting
licenses" and farmers "do little but acquiesce in the hope that condi-
tions will be improved." "The opportunity for cooperative wildlife work
is unlimited in soil conservation districts," he added, "because their
philosophy is to place the responsibility for soil conservation and good
land use squarely on the shoulders of local people."

Washington Commissioners in Stafford Circuit Court (Va.) have
Farm Auction set February 3, as the date for sale at public auction
 of the 470-acre Ferry farm where George Washington spent
most of his boyhood. The farm is to be sold under a decree entered by
Judge Frederick W. Coleman in a suit to settle the estate of J. B. Col-
bert, owner of the property until his death in 1931. Representative
Sol Bloom of New York has said that he would start a movement to pre-
serve the farm as a national shrine. The George Washington Foundation,
Inc., was formed about ten years ago to buy the place as a shrine, and
payments of about \$85,000 were made on the purchase price, but payments
have been in default since 1931. (A.P.)

DAILY DIGEST

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Vol. LXXV, No. 51

Section 1

December 12, 1939

STATE TRADE BARRIERS

Holding that the erection of trade barriers between the states was resulting in the "Balkanization of America," Gov. Lloyd C. Stark of Missouri called upon the farmers and business men of the country last night to cooperate with the federal and state governments in eliminating "this growing evil." In addition to creating a greater interchange of commerce between the 48 states, the peaceful dissolution of trade barriers might possibly serve as a model to warring European nations who are "trying to batter down trade spite fences with the butts of rifles," Governor Stark contended.

Governor Stark received an award from the National Association of Accredited Publicity Directors for his campaign last year against state trade barriers created by state legislation. He said there was no condition in the nation today that was "more in need of publicity spotlighting" than the establishment of trade barriers between the states. (New York Times.)

COTTON EXPORT RATE REDUCED

Secretary Wallace announced yesterday the third cut in the export payment rate on cotton. The new rate, effective at 11 a.m. yesterday, is 20 cents a pound net weight basis and applies to lint cotton, card strips and comber waste. (A.P.)

WOOL SUPPLY SMALLER

The Department of Agriculture, asserting that November 1 wool supplies of the United States were the smallest in years, predicted yesterday a sharp increase in imports before the new domestic clip becomes available. Mill consumption of apparel wool in October was 38 percent higher than in October 1938, the department said. The rate had been exceeded in only three months in the last 15 years. (A.P.)

ADVERTISING COMMITTEE

Formation of what is believed to be the first joint advertising committee on a national scale, representing the consumer, retailer and advertising field, was announced yesterday by the National Consumer Retailer Council through Harold W. Brightman, chairman of the council. The purpose of the committee, he said, will be to promote the use of "more truthful and factual information in advertising." Representatives of more than a dozen national groups have been asked to collaborate in the work of the committees. (New York Times.)

Effects of War in Europe has caused exports of farm products
War on from the United States to be smaller than they other-
Agriculture wise would have been, members of the Agricultural Ad-
visory Council were told recently in a special report
by the Bureau of Agricultural Economics. The report states that little
change in imports of agricultural products has been occasioned by war
during the first three months of the conflict. The report concludes
that if European war continues through the current marketing year:
Imports of farm products will not be greatly affected; the tonnage of
United States farm products exported will be somewhat less than it
would have been had Europe stayed at peace; nevertheless, there will
be some increase in farm prices and income over what they would have
been without war. This increase will come about because of slight
speculative rises in the prices of farm products caused by anticipa-
tion of wartime demand plus greater domestic buying power brought about
by increased industrial production for war purposes.

The Advisory Council is told in the report that the following are
the chief forces at work in the wartime supply and demand situation:
The long period of unrest preceding war's outbreak enabled the warring
nations to accumulate much larger stocks of farm products than they
held in 1914 and their production at home is greater than in 1914.
Furthermore, when they do go into the world market to buy they can
select from a much wider range of sellers. South American countries
and Canada now are much more important suppliers of several farm com-
modities than in 1914. The warring nations have already put Govern-
mental controls over prices, imports, exports, methods of buying.
United States producers and users of goods are feeling the effects of
these controls, which are further implemented by the pooling of pur-
chasing by the British and French governments, to avoid competing with
each other in the world markets. The decisions on farm products bought
for the two governments will largely determine the volume of United
States exports. These decisions will be influenced by exchange rates,
which now favor sterling block countries as against the United States,
and the desirability of conserving dollar exchange mainly for buying
munitions and other industrial products which can be procured only
from the United States. These considerations influence the Allied
nations to buy farm products chiefly from their dominions or other
countries with currencies closely linked to theirs, to whom they are
able to ship their manufactured products in exchange for farm products,
and from whom they can obtain credits.

Hunting Code A code of sportsmanship has been drawn up by the
State Game and Fish Commission for Colorado hunters,
says an Associated Press report from Colorado. The code says that a
hunter shall request permission from a farmer to hunt on his land and
that the hunter shall "conduct himself as a gentleman and sportsman."

Roadway Road builders of the western states are becoming
Erosion soil conservationists, says a report in the Denver Post.
A new department in the Public Roads Administration has been charged specifically with studying methods of erosion control. State highway departments have already experimented with various means of protecting their roadways and adjacent lands from erosion and the Soil Conservation Service is lending a hand. Two engineers of the Public Roads Administration, R. S. Corlew and F. E. Amman, will work out conservation plans to be used on federal highways already built and will incorporate erosion control methods in specifications for new construction. They also will cooperate with the Colorado state highway department in developing erosion control for all state roads.

"While our job applies directly to highway construction," Corlew said, "soil conservation is such a broad program that we cannot work alone. We must have the assistance of the farmers on adjacent lands." Chief problems encountered by road builders, Corlew said, are in erosion of drainage ditches and borrow pits alongside the highway; erosion of the roadway section itself where the shoulders and slopes are washed out; erosion of adjacent lands which deposit silt along the highway in fan-like deltas, and wind erosion in cuts and fills.

Farmers are encouraged to construct furrow systems on lands adjacent to the highways which will prevent runoff from the lands to the highways and eliminate the formation of deltas on the road itself. Checking the runoff from adjacent lands also is important in protecting the drainage ditches, Corlew said. It is in this part of the program that the Soil Conservation Service is asked to cooperate.

The War and "We urge all farmers, as they lay plans for 1940,
the Farmer to give careful consideration to the probable effects of
the war on American agriculture," says an editorial in the Southern Agriculturist (December). "For the time being all European countries are believed to be fairly well supplied with foodstuffs, while the United States is over-supplied. Remember that the last World War had been under way for more than a year before there was any substantial increase in farm prices in this country. We should also keep in mind that European nations do not have the buying power or extensive credit that they had in the other World War. This means that southern farmers should not make any radical changes in their general farming plans..."

"Locker A new industry, refrigerated lockers, has given
Patron" rise to a new publication, the Locker Patron, published
monthly. The December issue (Vol. 1, No. 5) has just been received by the Department Library. It reports that the first national convention of the Refrigerated Locker and Frozen Food Industries met in Des Moines, Iowa, this month. One locker system manufacturer, contending that some patrons dislike to enter a cold locker room, is putting on the market refrigerated, portable lockers which do not need to be put in a cold room, says the publication.

Bag Salvage Association "The action of nine of the country's principal manufacturers of textile bags in setting up a special agency (Textile Bag Salvage Association) to supply a market and develop commercial outlets for once-used flour sacks is very commendable," says an editorial in the Northwestern Miller (December 6). "It is greatly to be hoped, now that a market for once-used bags is in prospect at a price which will greatly reduce the baker's incentive to use old bags for many round trips, the baking industry will join in use of the new service. There is no point to disputing the fact that -- whatever may be said in defense of well-cleaned or laundered grain bags for re-use as flour containers -- the dirtiness of part of the jute and plain cotton bags now used for transporting flour to bakers constitutes a spot on the exceptional cleanliness of every other operation in commercial baking...The day is not far off when the re-use of any fabric container for flour will be prohibited by law..."

Trends in Sheep Types "A renewed attempt is taking place to adapt sheep type to the region or sections in which they are being produced," says Fredric S. Hultz, University of Wyoming, in an article in the Southwestern Sheep and Goat Raiser (December). "There is less being thought and said about a standard type for any one breed. The commercial grower of lambs will be buying his bucks from the breeder whose type best suits the condition of that grower's regional requirements...New Federal and State research agencies are interesting themselves in programs of experimentation which may result in continuous and permanent progress toward more prepotent livestock -- and sheep are being included in these programs. If the time should come when these agencies have not only produced a variety of strains or families to meet the conditions of various live stock regions, but also can warrant that each of these strains will reproduce its own type with reasonable certainty when used under commercial conditions of livestock husbandry, then in truth we are on the right track. If some of the programs for selection, inbreeding and progeny testing now under way receive the moral and financial encouragement which they deserve, it seems likely that they may succeed where many generations of private breeder effort have failed..."

Weather Recorder The University of New Hampshire is assisting America's airline travel through a government weather observatory recently set up at Durham, says a report to the New York Times. Every three hours the station observes wind velocity and direction, visibility and ceiling, cloud formations, humidity and temperature. Reports are coded in ten-word telegrams to the East Boston airport. Heading the observatory is Dr. Donald H. Chapman, university meteorologist. "The station is not one for predicting the weather," Doctor Chapman said. "We merely record what is present and send the facts to Boston."

DAILY DIGEST

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Section 1

December 13, 1939

FOREIGN TRADE, CURRENCIES, DANZIG TARIFF "President Roosevelt said yesterday that he intends to ask Congress next month to extend the life of the reciprocal trade agreements act, chief of the changes in the United States foreign policy started by himself and Secretary Hull," says Turner Catledge in the New York Times. "It would expire by its own terms in June. The President's statement was made in answer to questions at his press conference...He said there were a great many countries not yet covered by United States trade agreements which constitute a field for extending the program. He suggested, moreover, that there were details yet to be worked out with countries with which this government had negotiated agreements and which in turn would contribute to increased export business..."

"Sir John Simon, Chancellor of the Exchequer, announced in the House of Commons yesterday that Britain and France had accepted the principle of monetary solidarity and had concluded an unprecedented financial agreement under which the two countries agreed to stabilize their currencies at the rate of 176 1/2 francs to the pound until six months after signing of the peace treaty," reports the London correspondent of the Times. "The agreement...is being interpreted in Britain as an even more important development than the signing of the wider agreement on economic cooperation last month..."

The U. S. Treasury Department yesterday advised customs officials that henceforth the rates of duty that apply to goods from Germany will be applicable to products imported from Danzig and the German-controlled parts of Poland. This withdraws most-favored-nation treatment from these German-controlled areas. (Press.)

EGG FUTURE PRICES UP The U.S. Government went to the support of the faltering egg market yesterday with an expenditure of \$600, which halted, momentarily at least, the month-long decline in egg prices, says an Associated Press report. The Government purchased 3,000 dozens of fresh firsts, bidding the price up 1/4 cent a dozen to 20 cents. The eggs will be used for home relief. They were purchased at New York.

Egg future prices advanced nearly a cent a dozen yesterday at Chicago following reports that the Government had re-entered the New York spot market for the first time since November 1. The market closed with fresh firsts quoted at 18 1/2 cents. (A.P.).

Timber "On September 21 last year a tropical hurricane
Salvage rampaged across the Northeast, cutting a swath 125
 miles wide through New England forests," says Business
Week (December 9), "and a little more than a year later a \$14,400,000
deal involving the sale of 600,000,000 board feet of the salvaged
timber was announced. Between the two dates lies an epic in lumbering.
It involved guarding entire states from the threat of forest fires,
logging downed trees so as to protect future growth, sawing up logs
where water storage was not available, marketing this huge and sudden
output so as not to swamp the market, and protecting the property
owners all along the line. Credit for this improbable feat goes mainly
to United States Forest Service men working through the federal govern-
ment's Northeastern Timber Salvage Administration.

"...Thoughtful Yanks shudder to imagine what could have happened
if the federal government hadn't acted swiftly after the disaster. A
dry spell, a high wind, a dropped match -- and a goodly section of
New England might have gone up in smoke...Difficulties of the job were
immense. Full 98 percent of the land was privately owned. Thirty
thousand owners had to be located and induced to sign timber purchase
agreements. One of them was found in Cairo, one in Ethiopia and
several in London. Most of them saw the advantage of immediate salvage.
While the government program saved 600,000,000 feet of boards, private
interests have salvaged an additional 383,600,000.

"...There is still much work to be done. Since all brush and
debris could not be cleaned up, New England will be under an additional
fire hazard. But the calamity did bring some benefits. The region now
has more fire lanes and roads by which fires can be attacked. Opera-
tions by scientific foresters showed the Yanks better methods of log-
ging, sawing, grading, selling. And above all it has dramatized for
New England the value of long-range planning for the New England acre-
age which is suitable only for forests."

Bee Disease American Bee Journal (December) contains a paper
Resistance on the results of Iowa's 1937-38 honeybee disease
 resistance program, by Messrs. Park, Pellett, and Pad-
dock, of the Iowa Experiment Station. "It is encouraging to note,"
they say in the summary, "that as a result of the careful selection
and breeding practiced, there has been a constant and significant in-
crease in the percentage of resistant offspring obtained year by
year. It is not expected, however, that the increase in resistance
will continue year after year at the rate shown thus far. It seems
more probable that the nearer the goal is approached the smaller will
be the increases secured. The prospects now appear good for establish-
ing a strain of bees that will produce resistant colonies in a high per-
centage of cases, but the problem will not be solved until resistance to
American foulbrood has been combined with other desirable characters
such as high production and good handling qualities. Years of selective
breeding are still ahead."

Plastics for
Posterity

"The most interesting thing, and the most beautiful, at the recent cornerstone-laying ceremony of the Western Regional Research Laboratory at Albany, California, was the plastic in which perishable specimens were preserved for posterity in the copper box in the cornerstone," says an editorial in Pacific Rural Press (December 2). "This plastic was transparent, clearer than the finest glass and was cast around dehydrated insects, animals and plants without a single air bubble to interfere with visibility. It could be ground to magnifying curves, if desired, to bring out the details of the imbedded specimens. Presumably it is so enduring that when men in some distant age dig in the debris of an untenanted earth and wonder about the forms of life in the past, these plastic bars will show them specimens in perfect form and color.

"Plastic is one of the miracles of modern chemistry, and is of special interest to farmers because it is made from things which grow in the soil. Perhaps none of us are wise enough to visualize the extent to which advances of chemistry may change the face of the world and the habits of life...The plastic put in the cornerstone at Albany was acrylic resin, taken by chemists of the U. S. Department of Agriculture, moulded around the specimen, and solidified. The head of wheat put away had every beard in place..."

Foreign Trade
Report

Although the European conflict will unquestionably improve the competitive trade position of the United States in Latin America, war does not mean automatic prosperity for those nations, nor that this country will get all the export markets which Germany has lost, the Foreign Policy Association asserts, in a report issued recently. "Expansion of United States exports to Latin America while this country is a neutral and Europe is at war depends fundamentally on Latin America's ability to maintain or increase its purchasing power," the report said. "This, in turn, depends on the trend of prices for Latin American raw materials and foodstuffs and an increase in demand for these products in other countries to offset the loss of German trade. Perhaps the most important potential influence is that of economic recovery in the United States -- whether or not stimulated by the war itself." (New York Times.)

Locker Plant
Inspection

Frozen food locker plants come under the jurisdiction of the Wisconsin Department of Agriculture and Markets, says Ice and Refrigeration (December). Laws provide that locker plants must take out a license. There is no charge for inspection as to sanitation. The time limit of all cold storage merchandise has been changed from 13 to 18 months.

Sugarcane
Breeding

"For many years the Division of Sugar Plant Investigations, Bureau of Plant Industry, has collected from the temperate zones and tropics throughout the world many wild or primitive forms of sugarcane having in the aggregate a varied assortment of characteristics of value, including the desired growth qualities and cold resistance," say E. W. Brandes and Julius Matz, of the bureau, in an article on breeding temperate zone sugarcane, in the Sugar Journal (November). "The wild canes, numbering now more than fifty, have been assembled at several field stations and laboratories maintained by the bureau. As a new departure in this work the entire collection is planted for comparative purposes at each of five stations located as nearly as possible on a meridian at wide intervals of latitude extending from the equator to 37 degrees north. The plants are being systematically studied to determine and evaluate the growth rate under different conditions, resistance to various diseases, response to soil conditions and soil amendments, and the numerous other relationships of a plant to its environment for consideration of the practicability of improving commercial varieties of sugarcane for different areas by breeding. It is assumed that by hybridizing the particular wild forms having the characteristics in question with commercial varieties by a system of crossing, selection and backcrossing, new varieties may be developed that retain the good qualities of the commercial cane and a measure of the desired characteristics of the wild cane parent..."

"Doctor Brandes is known, at least by reputation, to everyone through the world who is interested in the growing of sugar cane," says an editor's note. "The people of Louisiana are particularly indebted to Doctor Brandes because due to his efforts we have P.O.J. cane in Louisiana, and he and his staff were responsible for the new and improved canes now in use..."

Chicks from
Hatcheries

Poultry and egg producers continue to turn from home hatching to commercial hatcheries as a source of chicks, the Agricultural Marketing Service reports. In 1928 one-third of the chicks hatched were produced in commercial and breeder hatcheries. By 1934 this proportion had increased to almost half. Today the proportion probably is larger. Some hatcheries now operate every month in the year and fully a third of them operate six months or more. The rapid growth of large-scale production of eggs and broilers in areas close to consuming markets is held by poultry specialists as one of the major causes for the increasing demand for hatchery chicks in place of home-hatched birds. Commercial producers are turning out an increasing proportion of total production of both eggs and poultry.

DAILY DIGEST

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Section 1

December 14, 1939

FARM SECURITY ANNUAL REPORT

Federal shelters for migrant farm laborers, affording steadier employment and including perhaps subsistence farming, and a chance to educate their children were urged yesterday by Dr. W. W. Alexander, Farm Security Administrator, as the most urgently needed solution to the farm labor problem. In his annual report, he listed mechanization, rural unemployment, instability of residence, insecurity, inadequate income and unwholesome environment as among the major evils which have overtaken the hundreds of thousands of farm families rushed off the land since 1930 by drought and foreclosure.

About 30,000 of these people, divided into 7,809 families, have found shelter in thirty-two federal camps distributed among seven states, California, Oregon, Washington, Idaho, Arizona, Texas and Florida. His administration's major efforts at rehabilitation, Dr. Alexander reported, are directed to checking migration at its source by helping needy families stay on their land. Some 1,231,000 families have received aid under tenant purchase programs and other plans of the Farm Security Administration, which "is now helping more than 589,000 farm families to plan and finance their farming operations."

"Most of these uprooted families," he added, "were forced to take to the highways in search of work. Few found work in industry; the cities were already filled with the unemployed. For the most part the jobs they found were seasonal day labor in the only trade they know, farming. The largest employers of these displaced rural families were the mechanized farms, which have been growing in number and extent for a decade. These farms have eliminated most of the resident labor formerly needed, but they still require large numbers of workers, for short periods, to do the hard labor involved in thinning, harvesting or packing processes not yet fully mechanized..." (New York Times.)

GRAIN, COTTON PRICES RISE

"Rising trends in commodity prices expressed themselves yesterday in large advances in wheat, corn and other grains," says Felix Cotten, Washington Post staff writer. "Cotton continued to rise, although less sensationally than Tuesday. Impairment of the winter wheat crop, due to the severe western drought, and uncertainty over the effect on the spring wheat crop were reflected in an advance of over 3 cents a bushel in December wheat contracts, with distant months up 5 cents. Another factor was the lowered estimate of the Argentine wheat crop. The advance in wheat, the price of which passed \$1 a bushel at Chicago, came in spite of an abnormally heavy Canadian crop and a large carryover in the United States..."

Plastics for the Home In an effort to speed the introduction of plastics into home decorating and household use by acquainting interior decorators and designers with their characteristics and potentialities, the First National Conference on Plastics as Applied to Interior Design and Decoration was held recently in New York City. Fifteen manufacturers, some already well established in other fields, showed products covering twenty-five trade names. These included bathroom fixtures, plumbing fixtures, lighting equipment, clocks, dishes, decorative wall-panels, flooring, furnitures, radios, telephones, Venetian blinds, mirrors, draperies and even luggage. Among the characteristics of these plastics stressed were washability, imperviousness to acids, fire-resistance, durability, flexibility and low prices. The unusual decorative effects achieved by plastics were illustrated by a series of ribbed, embossed and corrugated wall coverings, comparable in prices to expensive wall papers. (New York Times.)

Food Stamps California's State Relief Administration recently in California signed a contract with the Federal Surplus Commodities Corporation to act as its agent in the sale of food stamps on a voluntary basis to those who receive any form of public relief, says a Sacramento report in the Stockton Record. The agreement, first of the kind to be negotiated with a state relief administration, was approved by Governor Olson. Relief clients, including those on the dole, WPA, those receiving any form of county financial assistance, state old age assistance, federal state aid to the blind or orphans, can purchase food stamp books in as small amounts as \$4. Each \$4 book of orange stamps contains \$2 in blue stamps so the purchaser receives \$6 of stamps, in 25-cent denominations, for \$4. He cannot buy more than \$6 worth per person in any month.

Illinois First of its kind in Illinois, an egg auction of Egg Auction approximately 9,000 dozen eggs was held at Yorkville November 16 under auspices of the newly organized Yorkville Poultry and Egg Auction, it has been announced by Prof. H.H. Alp, poultry specialist of the University of Illinois, who assisted in starting the venture. Regular weekly auctions are now held. This is the first time that government graded eggs have been concentrated in volume for auction in Illinois, and the plan offers interesting possibilities to producers, buyers and consumers, Prof. Alp declared. (The American Produce Review, December 6.)

Garden An article in Parks & Recreation (December) reports Center that since the first Garden Center was organized in Cleveland in 1930, 140 large cities have organized these horticultural services. Public response to the Garden Center of Cleveland has brought the average attendance from 2,000 persons per month in 1934 to 8,000 per month in 1939. The city gives the use of a building to the Garden Center. Its library contains 1,500 books on horticulture, landscaping and conservation and also garden magazines, bulletins, and catalogues.

Drought

Continues

The Weather Bureau reports that except in limited areas, widespread droughty conditions were not only unrelieved the past week, but intensified in many places. Following the driest fall of record, December so far has had no appreciable precipitation from the Rocky Mountains eastward, except very locally. There was considerable drifting of soil during the week in a good many western sections, including parts of Wyoming, South Dakota, Kansas, and Oklahoma. Drought conditions are gradually becoming worse in the western Winter Wheat Belt; in the central and eastern portions the week brought little change in the outlook. In Kansas the outlook is still poor, except in the east where some growth is reported. In the northern Great Plains, the central Rocky Mountain States and eastern Great Basin unfavorable dryness continues. In Montana wheat seeded on stubble and corn land is extremely poor.

Record warmth for the season and continued drought have resulted in an unusual lack of snow-cover for the season. The Great Plains area to the Canadian border is bare, Michigan reports only 2 traces, and in New York and New England the most cover reported was 4 inches at Plattsburg, Beaver River, and Malone in the former, and 10 inches in extreme northern New Hampshire. Depths in Maine seldom exceed 4 inches. Little snow is reported in the far West.

For severe droughts, such as obtained during the fall of 1939, figures showing the actual water shortage per acre of land are more expressive than bare statements of either percentages of normal rainfall or deficiencies in inches. For example, the normal for the three fall months for the State of Kansas, the principal winter wheat State, is 6.09 inches, while the total received this year was 1.75 inches, making a deficiency of 4.34 inches. In water equivalent, this shortage, with the normal as a base, represents 490 tons on the average for each acre of land, or more than 25 billion tons for the State. The greatest deficiency, by far, occurred in the western part of the State. For the country as a whole, the fall shortage of water was more than 400 billion tons.

Chicago

Milk Order

"In a recent issue of Pure Milk, Arthur H. Lauterbach, general manager of the Pure Milk Association, expresses satisfaction on the success of the Chicago federal milk order during the first two months of its operation. 'It has exceeded even the fondest hopes of everyone interested in the Chicago milk market.'... Things are running smoothly with the Chicago federal milk order because of the common sense displayed by Mr. Lauterbach who has assisted in having the price of fluid milk in keeping with the prices of butter and cheese and condensed milk. If this policy is continued, then we will expect the milk order to run smoothly, for without question the supervision of the federal government as an umpire can be of assistance to well organized and managed cooperative marketing associations... Surplus milk not only affects the fluid market but also the butter, cheese, and condensed milk. Patrons of creameries and cheese factories have entered protests when fluid milk producers have oversupplied their market and their surplus has been made into butter or cheese..."

Stock Disease "Although foot-and-mouth disease, rinderpest, and
Regulations anthrax are distinct contagious diseases of animals, the
 protective regulations designed to keep the diseases out
of the United States have blanketed them under similar regulations,"
says an editorial in the Western Livestock Journal. "A recent order,
administered by the Bureau of Animal Industry and applying principally
to hides and skins and other by-products of animals, takes anthrax out
of this grouping and relaxes import restrictions where anthrax is the
only hazard, but regulates even more strictly certain imports from
countries where foot-and-mouth disease or rinderpest exists...The modi-
fication is the result of scientific investigations that indicate that
modern methods for control of anthrax have made the disease less of a
threat than formerly and that the rigid restrictions that have prevail-
ed on international trade are no longer necessary. At the same time,
the spread of foot-and-mouth disease to new territory abroad in the last
two years in spite of intensive preventive efforts have made even more
obvious the importance of keeping this highly contagious malady out of
the United States."

Erosion "Rotation in crops is becoming a religion as
Control farmers in the South and Middle West experiment with new
 methods of soil erosion," says an editorial in Topeka
Capital. "Never before has the produce of the soil been so carefully
planned as it is today. Agricultural colleges, cooperative farm agen-
cies and the United States Department of Agriculture are working with
the farmer to enable him to obtain the greatest possible benefit from
his land. Traditional crops have been abandoned for new products that
will not deplete the soil of its nourishment and will be marketable at
reasonable prices. Soil erosion is being checked in many sections by
producing the industrial crops -- castor beans, soybeans, sweet pota-
toes and similar products.

"The farm problem is by no means a closed issue, and it is not
likely to be very soon. Steps taken thus far cannot be accepted as a
complete solution. Many of the measures taken in the past seven years
have been strictly in the nature of relief. But the farmer, with the
help of experts, is willing to experiment with methods which promise
to keep his land from washing or blowing away..."

Metal A device for detecting spikes and other metal objects
in Logs buried in logs has been developed by the Forest Service.
 Metal objects in logs are potential causes of costly and
sometimes fatal saw-smashing accidents. The device was developed for use
by the Northeastern Timber Salvage Administration because an unusually
high percentage of down timber hit by the 1938 hurricane was found to
conceal fence nails, hammock hooks, spikes, sugar sap spouts and even
sections of scythe blades. The detector was designed and built in the
Forest Service Radio Laboratory at Portland, Oregon.

DAILY DIGEST

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Vol. LXXV, No. 54

Section 1

December 15, 1959

WALLACE ON TRADE PACTS, FARM PRICES Secretary Wallace told a farm audience in St. Paul last night that the reciprocal trade agreements had benefited American producers by an increase of exports over imports equivalent to the crops of 5,000,000 acres, according to a report to the New York Times. The assertion was made in an address to the Farmers Union Grain Terminal Association, the Farmers Union Live Stock Commission Company and the Farmers Union Central Exchange, as a "tentative and preliminary estimate" of the result of the program, up to the outbreak of the European war. A full and careful analysis is being made, the Secretary of Agriculture announced.

Mr. Wallace reiterated his assertion that, with defense and other costs upon the Federal Treasury increasing, a "continuing source of revenue" must be found to support the farm program. He called attention specifically to the producers income certificate plan, under which certificates, issued to farmers, would be sold, with the crop, to processors. This plan, he said, might be expected to achieve the benefits of the processing tax, outlawed by the Supreme Court, resting legally, however, on the power of Congress to regulate interstate commerce rather than on its power to tax.

"I hope the millers will realize that with world conditions as they are, an effective wheat program is absolutely necessary," Mr. Wallace said. "I see only four alternatives: (1) substantial appropriations from the Federal Treasury; (2) some plan on the order of the certificate plan; (3) outright price fixing; or (4) to scrap all efforts to help the farmers..."

Mr. Wallace deprecated fears among farmers that, through an agreement with the Argentine, the United States might be flooded with such competitive products as beef, flax, poultry and dairy products, and asserted that western wheat growers, in particular, had reason to seek agricultural co-operation with that nation.

CARNEGIE EXHIBIT At 7:30 p.m. tomorrow the Carnegie Institution of Washington (1530 P Street NW) will open its annual scientific exhibit, presenting results of recent research in physics, astronomy and plant and animal biology. Visiting hours are 7:30 to 10:30 p.m. tomorrow and on Sunday and Monday from 2 to 5 p.m. and 7:30 to 10:30 p.m. Six public lectures are scheduled for Elihu Root Hall administration building. (Washington Post.)

Farm Credit
and Soil
Conservation

In "Farm-Credit Policy as a Factor in Soil Conservation," the leading article in the Journal of Land & Public Utility Economics (November) E. C. Johnson, of the Farm Credit Administration, says in conclusion: "It is well to mention that the combined efforts of many groups and institutions are necessary to achieve a goal of effective utilization of our human and natural resources. Creditors play an important role and by intelligently directing the flow of capital into agriculture, so that it will result not in a speculative increase in sale price of land but in actual improvement of farms and improved farming practices, they can contribute greatly to the general welfare of the people."

Colorado
Zoning and
Planning

In 1939 Colorado passed an act authorizing planning and zoning of unincorporated territory, says George S. Wehrwein, University of Wisconsin, in the Journal of Land & Public Utility Economics (November). "This law permits planning and zoning in three forms -- by individual counties, by a group of counties as a region, and by districts within counties. The purposes for which a plan can be made are broad and comprehensive, the general purpose being to guide and develop a coordinated, adjusted, and harmonious development of the country or region. The purely rural aspects are given a place in planning such distribution of population 'as will tend to reduce the wastes of physical, financial, or human resources which result from either excessive/scattering or excessive' Agriculture, recreation, forestry, and habitation are mentioned as land uses to be planned and among the purposes of zoning are 'the classification of land uses,' 'protection of the tax base, securing economy in governmental expenditures, fostering the State's agricultural and other industries and the protection of both urban and non-urban development.'..."

Insurance
Against
Frost

"For the first time in many years frost insurance is again available," says Citrus Leaves (December), "but in a form that is believed to be economically sound and fair. The new form of insurance does not try to guarantee the market for the crop, as in the past. Instead it insures the grower that he will get his cost of production out of his crop. If the returns on his fruit are greater than production cost, there will be no recovery under the insurance, but if because of frost a grower receives insufficient returns to equal expenses, he will be paid the difference between his returns and the expense of raising the crop. Basic rates vary from 6 percent to 10 percent depending on location, for navels, with surcharges for Valencias and lemons and credit for grapefruit. Discounts as high as 50 percent are granted for heaters and oil storage."

Tuberculosis "Every herd of cattle in the United States has
Eradication been tested for tuberculosis at least once," says an
Campaign editorial in Milk Plant Monthly (December). "Thus
 begins a simple routine announcement by the U. S.
Department of Agriculture. The simplicity of the announcement is
probably the reason why so little notice has been taken of it by the
press in general." After quoting the announcement in full, the edi-
torial continues:

"It is difficult to realize the importance of this achievement
for public health. Twenty-two years ago tuberculosis was still the
chief cause of death in the United States. A considerable part of
the cases was believed to be derived from milk from tuberculous
cattle. It was thought nothing short of heroic to undertake to test
all the milk cows of the country and to eliminate the infected ones.
The scientists of the Department of Agriculture obtained Congressional
appropriations and embarked upon this herculean enterprise. For
twenty-two years our scientific workers carried on the job, and, at
last success is at hand.

"It should not be forgotten that much more is involved in this
achievement than the elimination of tuberculosis, great as that result
is. In order to be accredited with the practical elimination of tuber-
culosis the herdsman must follow a general program of sanitation for
his herd, and in the periodical retestings which will be carried on
in order to secure the permanency of the success attained in elimina-
tion, this sanitation must be continued. By attaining protection
against tuberculosis, therefore, protection against other infections
is greatly extended and fortified. It carries with it an enormous
program of general health protection..."

Farm Living "The farmer today demands a standard of living in
Standards keeping to the contribution he makes to the national
 economy," says Clarence Roberts, editor of the Farmer
Stockman, in the Daily Oklahoman. "He sees no reason why he should not
enjoy most of those conveniences found in our cities and towns as a mat-
ter of course. But to obtain all those things takes money, far more
money than farmers 40 years ago dreamed of having. Automobiles, trac-
tors, radios, bath tubs, washing machines, refrigerators, etc., must be
bought. To buy and maintain them the farmer must produce far above
the animal needs of his family, and he must sell his products at a fair
exchange value.

"When farm prices were low back in 1920-25, the farmer faced a
choice. He could take what might be dished out to him and sink back
into a state of chronic poverty. Or, he could make a fight for a share
of the national income which would permit him to live in decency and
on a level comparable to men in town who render a like service to the
nation. In the good old traditional American spirit he decided to fight.
He is demanding government aid, not because he believes in aid as such,
but because it seems at the moment the only attack on his problem that
will get results."

Vaccine Discovery within recent years at Vanderbilt
from Chick University that the incubating egg may be used in
Embryo propagating the viruses which cause certain animal
 diseases, has given scientists of the Bureau of Animal
Industry an effective weapon for fighting some of the most baffling
plagues of livestock. Already embryos are used in making vaccines
for such diseases as pox of birds, encephalomyelitis of horses, and
laryngotracheitis of poultry. Preliminary research shows promising
results in developing vaccines for vesicular stomatitis, horse and
swine influenza, dog distemper, cat distemper (feline infectious
enteritis), rabies and pseudo rabies.

In the past vaccines were prepared by injecting the virus into
the body or blood of laboratory animals so that the amount of virus
could be multiplied. This method often cost the lives of the
laboratory animals, added to the cost of the vaccine, which was not
always dependable as to strength or amount, and there always was the
chance of contamination. The shell, bureau scientists point out,
makes the embryo an ideal host to the virus because it insures against
outside contamination. The virus is injected in an air cell with a
hypodermic needle, the shell about the hole painted with iodine, and
the holes sealed with sealing wax. The virus "grows" until the embryo
is killed or develops characteristic lesions.

With the incubating egg, injected with virus at 11 days, the
embryo usually dies in about 16 hours. It is possible to measure the
amount of virus that has "grown" during the period. The scientists
found, for instance, that it is not unusual for an egg to develop as
much as 5,000,000 or more "M.L.D.'s" (Minimal lethal doses), per
gram of weight. A virus has an infective and an anti-infective
quality. Treated with formalin in a saline solution, the infective
quality is killed, leaving the anti-infective quality known as antigen.
The animal, when inoculated with antigen, develops immunity to the
disease for at least one season in the case of encephalomyelitis.

More than 800,000 horses and mules were reported to the bureau
as treated with the chick-embryo vaccine this year. Only 289 of the
vaccinated animals developed the disease, or 0.36 case per 1000
animals, compared with 1.3 cases per 1000 unvaccinated animals in the
same areas. It is probable that many more animals were vaccinated
than reported, since enough vaccine was produced in 1939 to vaccinate
at least 3,000,000 animals.

Forest Pennsylvania has enlisted the shortwave radio and
Patrol the airplane to fight the forest fire. Chains of
 observation towers in northern and central Pennsylvania
protecting thousands of acres of forest land are linked by sending and
receiving radio equipment. Pilots flying regularly scheduled air
routes have been requested to radio all signs of forest fires immedi-
ately to state headquarters in Harrisburg. The department of forests
and waters reported this type of "spotting" has been one of the most
effective yet devised. (United Press.)

DAILY DIGEST

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Section 1

December 18, 1939

MULTIPLE CAR RATES

Reversing a long-time policy, the Interstate Commerce Commission has approved establishment of reduced railroad rates for multiple car shipments. The commission, in an 8-to-2 decision, ruled that there was "nothing unlawful" in the establishment of rates on a quantity larger than a carload, moving as a single shipment, when the rates were designed to meet competition from other modes of transportation. It stipulated, however, that "a just and reasonable relation" must be maintained in rates between the larger and smaller quantities. (A.P.)

COTTON AT 2-YEAR HIGH

Prices of cotton on the New York Cotton Exchange moved last week into the highest ground in more than two years. They reacted from their peaks, but turned firmer again in the final dealings. At the close of trading on Saturday, old type futures contracts were 61 to 67 points higher than they had been a week before, while the distant new type October delivery showed a net gain of 64 points. The rapid rise in domestic cotton quotations last week was caused in large part by sharp gains in foreign markets.

The New Orleans cotton market was more active than in any preceding week in several years. Not only was the volume of business large, but prices reached the highest levels of the season, with the December at 11.62 cents a pound bid on Wednesday and the March at 11.33 cents, or more than \$1 a bale above the highest prices of the preceding week. (New York Times.)

B. H. E. EXHIBIT

An exhibit just opened in the patio of the Administration Building shows some of the work of the Bureau of Home Economics, which is fifteen years old this year. The exhibit, which is open from 9 a.m. to 6 p.m. Monday through Friday and from 9 a.m. to 1 p.m. Saturday, will last about a month.

COTTON USE INCREASES

The Census Bureau has reported that cotton consumed during November totaled 718,721 bales of lint and 90,701 of linters, compared with 686,936 and 97,706 during October this year and 596,416 and 68,754 during November last year. Imports during November totaled 10,679 bales, compared with 13,678 during October this year and 14,322 during November last year. (A.P.)

Utilization
of Dairy
By Products

"During the last few years a considerable amount of attention has been centered on the industrial utilization of some of the by-products of the dairy industry, and a number of the achievements which have been made in this direction were discussed at a recent symposium (by E. O. Whittier and the late S. P. Gould, Bureau of Dairy Industry)," says an editorial in the Journal of the American Medical Association (December 9). "In this country there is reportedly a potential annual supply of skim milk of forty billion pounds over and above that now converted into industrial products and, according to investigators in the United States Department of Agriculture, it should be possible for casein fiber to be produced much more cheaply than wool. Whether or not casein fiber will be used extensively in this country as a diluent or extender of wool remains to be seen....

"Cheese factories converted more than a million pounds of whey into powder in 1937, and investigators in the United States Department of Agriculture have already devised a process for separating the whey powder into lactose, a protein-rich concentrate, and a solution rich in vitamin G. The lactose may be used in medicinal preparations and in infant foods as well as in the manufacture of candy. The production of lactic acid by fermentation of the lactose in whey is also a commercial activity.... It seems probable that in the near future lactic acid will play an increasingly important part in the field of solvents, in plastics, and as an acidulant for beverages and foods.

"Important advances have been made in the direction of the utilization of by-products of the dairy industry. These developments are of particular interest as they involve the important nutrient milk. Moreover, some of the by-products may, in turn, be incorporated in certain foods as well as used in the manufacture of pharmaceuticals."

Hatch Act
Regulations

New regulations, intended to bar nearly a million Federal employees from political activity, have been released by the Civil Service Commission, says a report in the Washington Times Herald. The commission emphasized that its rules will apply to some 300,000 New Deal emergency employees as well as those in the classified service. Restrictions imposed upon Federal employees by passage of the Hatch Act last summer are discussed in detail by the commission in its publication. The commission's own rules are modified to conform with the Hatch Act.

N. Y. Farm
Milk Price

The November price of \$2.28 a hundredweight paid to dairy farmers in the New York milkshed is the second highest price for any November since 1930, it was announced by E. M. Harmon, Federal-State administration of the milk marketing pool. The farmers got \$2.42 in November, 1937, and \$2.75 in November, 1930. (Press.)

Sweet Potato
Breeding

"Recognition of revolutionary work in sweet potato breeding by Dr. J. C. Miller, Experiment Station horticulturist, and his associates, comes to Louisiana in the form of nearly one third of the \$32,000 special appropriation recently made for sweet potato research," says Farm and Ranch (December). "Three years ago Doctor Miller and his staff worked out a method of bringing the sweet potato into flower. This makes possible the use of genetics in creating new varieties...The \$10,000 assigned to the Louisiana Experiment Station for sweet potato work, says Dr. C. T. Dowell, director of the station, will be devoted to the study of diseases and the improvement of two new varieties -- one, a superior table variety with a higher carotene content and uniform flesh color, and the other a high-yielding sort with a high starch content, for industrial use."

Cotton Ditch
Lining

Cotton linings for irrigation ditches may be one way to make a dent in the surplus cotton of the South, it was suggested to the National Reclamation Association meeting recently, says Science Service. W. H. Robinson, manager of an irrigation district in Idaho, described how a section of an irrigation canal was lined with a mixture of asphalt and gravel backed by heavy cotton fabric. Water losses in this section, which formerly ran from 20 to 30 percent, have now been cut to about one and one half percent. The standard method of lining irrigation canals is with concrete. The cotton-gravel-asphalt liner is cheaper. Mr. Robinson said that the Colorado Experiment Station has also experimented with cotton linings for irrigation ditches with good results.

Express
by Air

Express Messenger--(December) reports that semen from a purebred Jersey bull at the Golden Gate Exposition was air expressed in refrigerated test tubes to the Borden exhibit at the New York World's Fair. The American Jersey Cattle Club sponsored the experiment. The first insemination at New York was made less than 24 hours after the semen was collected at San Francisco by a veterinary specialist of the University of California. The publication also reports that prize dahlias in 25 cartons weighing 297 pounds were air expressed from Portland, Oregon, to the San Francisco exposition; and that eight white rats were air expressed from New York to Jackson, Mississippi, to form part of a nutrition display at the Mississippi State Fair.

Forest Areas
Increased

The National Forest Reservation has approved the purchase of 143,558 acres of land in twenty-two States and Puerto Rico, at a cost of \$573,237, for incorporation in the public domain. Purchases will be resumed in Ohio, Indiana, Iowa and North Carolina, a shortage of funds having stopped the acquisition programs there since 1936. Among the approved purchases is a tract of 2,354 acres of redwood lands in California, which will bring the government holdings of such lands to 8,605 acres. The area contains virgin timber for the most part. (Press.)

Nov. Exports A decline of \$30,000,000 or about 11 percent in
Reduced United States exports in November, compared with October,
 was described as "more than seasonal" by the Department
of Commerce and gave the first indication that United States trade is
being adversely affected by the war, despite foreign munitions buying.
November exports, exclusive of re-exports, were fixed at \$287,063,000
in a "preliminary" report by the department. Officials apparently did
not regard the decline as serious, however, noting that "the month's
exports were 15 percent higher than those of November, 1938, although
8 percent less than the figure for November, 1937."

"The relatively large seasonal contraction in November shipments
resulted chiefly from a greater-than-seasonal reduction in the exports
of agricultural products, which had registered marked gains in the im-
mediately preceding months," the department said. "The value of total
exports to the United Kingdom declined in November for the second con-
secutive month after showing marked increases in August and September.
The November total of exports of United States merchandise to the
United Kingdom aggregated \$31,026,000, compared with \$51,950,000 in
October and a monthly average of \$38,000,000 in the eight months pre-
ceding the outbreak of war in Europe." (New York Times.)

Orders Wheat President Roosevelt has directed the Tariff Com-
Import Study mission to determine whether there is any possibility
 of large amounts of foreign wheat, particularly
Canadian, being imported into the United States to compete with domestic
wheat, says an Associated Press report. He acted upon a recommendation
from the Department of Agriculture. In recent weeks, wheat has been
about 30 cents a bushel dearer in this country than in Canada, of-
ficials of the department said. While the existing tariff rate of 42
cents a bushel appeared to be sufficient to prevent large imports, they
recommended that the Tariff Commission be prepared to act if the tariff
advantage was wiped out. The President has authority to restrict im-
ports of agricultural products when such imports would tend to interfere
with government crop control programs.

Mich. Rural "A plan to reduce 'police problems' in rural areas
Boys' Clubs by forming boys' clubs in towns of 1,000 to 5,000 popu-
 lation, under the sponsorship of local social and
service organizations, has been announced by the Michigan State Police
who will aid in the work," says an editorial in the Michigan Farmer
(December 9). "Plans require that each club be given a charter by the
state police and that officers recommend the club program. Boys up to
21 years of age will be permitted to join. This is a most commendable
idea. Boys living in and around small cities often become just as much
of a problem to law enforcing officers as young city gangs, and through
these clubs they will be given an outlet for their energy under proper
guidance."

DAILY DIGEST

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Vol. LXXV, No. 56

Section 1

December 19, 1939

FARM PRICES

HIGHEST

SINCE 1937

Prices of important farm commodities, especially wheat, soybeans and rye, skyrocketed yesterday to the highest levels since 1937, says a Chicago report by the Associated Press. Stimulated by war and drought news, buying was so heavy that world-wide communication facilities of the Board of Trade were taxed to keep pace with the market.

Wheat shot up almost 5 cents a bushel to \$1.11 $\frac{1}{4}$, soybeans almost the daily limit of 8 cents to \$1.30 $\frac{1}{2}$ and rye almost 4 cents to 78. Corn gained about a cent. After an early spurt of 85 cents a bale to the highest level in more than two years, cotton backed down under heavy profit selling at New York and finished 40 cents a bale lower to 10 cents higher. Domestic sugar futures were higher. Hogs at Chicago scored their first substantial price advance in some time, climbing 10 to 15 cents a hundredweight to a top of \$5.60. Cattle were as much as 25 cents higher and fat lambs were steady.

U.S.-CUBAN

SUGAR PACT

A supplementary trade agreement between the United States and Cuba, providing for restitution of the 90 cents a hundred pounds tariff rate on Cuban sugar whenever the President restores the Cuban quota which was removed immediately after the start of war in Europe, was signed yesterday by Secretary Hull and the Cuban Ambassador, Dr. Pedro Martinez Fraga. The President is expected to restore the quota shortly. Under the Costigan Jones sugar act, the Department of Agriculture was authorized to establish quotas on sugar for various producing areas based upon domestic consumption. A Cuban quota of close to 2,000,000 tons a year was in force when the original United States Cuban trade agreement was made in 1934. (New York Times.)

FLOOD CONTROL

LITIGATION

The Supreme Court has ordered oral arguments on litigation potentially involving constitutionality of the Federal Government's huge flood control program. Specifically, it called for arguments January 29 on whether Oklahoma should be permitted to institute proceedings in the high tribunal seeking to enjoin Secretary of War Woodring from proceeding with construction of the \$54,000,000 Denison (Texas) dam. (A.P.)

FSCC PURCHASE

The Federal Surplus Commodities Corporation reported it had contracted to buy 50,000 pounds of lard and 216,000 pounds of salt pork for relief distribution. (A.P.)

Raw Wool
Supply

Some alleviation of the shortage of raw wool in the United States was indicated a few days ago in the announcement by the Australian government that it would ship 22,500,000 pounds of the commodity to this country at prices ranging from 90 cents to \$1.02 per pound, says a report in the Wall Street Journal. Prices are somewhat higher than the industry expected and will probably result in higher raw wool quotations in the Boston market. The wool, of which the major part is ready to be shipped immediately, does not include war risk insurance, port fees and other charges so that the net cost will be somewhat higher. Latest figures, covering the month of October, reveal domestic mills have been consuming an average of 6,800,000 scoured pounds of wool weekly.

Kan. Drought
Conference

At a drought conference called recently at Topeka by Governor Ratner of Kansas, it developed that while western Kansas has been receiving most of the drought notices, due to the backward condition of winter wheat in that area, conditions have a more menacing aspect in the eastern part of the state, says a correspondent of the New York Times. That is due to the difference in the geological formation in the two areas. Western Kansas has substorage of moisture, but the eastern part of the state must depend largely on surface water for its supplies.

It is felt that in order to overcome the handicap of future droughts the state should have more farm ponds, more county lakes and might dam streams at intervals to hold back water. The Agricultural Adjustment Administration will make part of its benefit payments for construction of water facilities by farmers. A new federal water facilities program, under which the Farm Security Administration will advance funds for the construction of ponds, wells and other water facilities, recently has been widened to include the whole state.

A committee of fourteen was named to work with the state legislative council and other agencies in correlating activities seeking to protect the state from future droughts.

T. N. E. C.
Report

The Temporary National Economic Committee reports that sharp price increases in grains, cotton and silk were the "outstanding feature" of recent commodity markets. In its fourth summary of the price situation, the committee said that Kansas City wheat was 41 percent higher than on August 26 and that cotton on December 13 was 34 percent higher.

Widest advances have been shown, the committee said, by products controlled by foreign nations or cartels. Selling at twice their prewar prices are cocoa beans, shellac and burlap. Quicksilver was said to be 75 percent higher than in August, silk has doubled in price since January and bananas increased almost 50 percent in price in a single week. If the rise in raw materials persists, the committee asserted, "its effect upon finished goods prices will become a matter of vital concern, if runaway prices are to be avoided and economy maintained on an even keel." (Washington Post.)

"Wholesale"
Rail Rates "In extending the principle of 'wholesale' rates for bulk shipments of commodities by rail, the Interstate Commerce Commission breaks a new path," says an editorial in the Wall Street Journal (December 16). "The logic according to which carload lots take a lower level of rates than less-than-carload lots has long been recognized by the commission and has been reflected in rate schedules from the earliest days of regulation. It applies to multiple carloads with equal force and the commission now recognizes this."

"In the case involving shipment of blackstrap molasses from New Orleans to Peoria and Pekin, it has permitted the railroads to establish a rate of 15 cents per 100 pounds for bulk consignments of 1,800 tons--about 38 carloads--as against 17 1/2 cents per 100 pounds for single-carload lots. The cars will travel as a solid unit from origin to destination..."

"This action by the commission may be welcomed as a step toward the modernization of the rail rate structure which is logically required by the new conditions of the industry. In that modernization, the legal principle of stare decisis should have little to say in the commission's deliberations."

1938 Lumber
Production Lumber production in the United States in 1938 showed a decrease from 1937, according to preliminary figures compiled from data collected in the annual lumber production inquiry released by the Bureau of the Census. The total lumber cut reported for 1938 amounted to 21,646,271 million feet, a decrease of 16.7 percent as compared with 25,996,357 million feet for the preceding year. Of the total 1938 lumber production, 33.2 percent, or 7,196,206 million feet, was yellow pine. This kind of wood was sawed in 21 states, of which seven reported more than 500,000 million feet each. Next in importance is Douglas fir, the cut of which amounted to 5,215,972 million feet, reported from 10 states, two of which--Washington and Oregon--contributed more than 94 percent of the total. (Southern Lumber Journal, December.)

Locker Plant
Association "A new industry came of age this month when 500 operators of cold storage locker plants officially formed the National Frozen Food Locker Association at a conference in Des Moines and selected as its official paper the Locker Patron," says Business Week (December 16). "Representing more than 2,000 locker plants, the organization will coordinate promotion work to get patrons to make continuous use of lockers, to visit them frequently and use them for storing foods over short, as well as long, periods of time...Although each plant averages an investment of \$7,500, there has been little tendency toward merger or chain operation in the industry. Largest operator in the field is a man in Portland, Oregon, who operates five plants with a total of 3,000 lockers. On the average, however, operators report an annual gross income of about \$4,000..."

Freight Cars Class I railroads had 36,198 new freight cars on order on December 1, the largest number at any one time since August 1, 1937, when there were 38,089 cars on order, the Association of American Railroads has announced. (Press.)

Price and
Demand

Improvement in conditions affecting the domestic demand for farm products has been pronounced since August, says the Bureau of Agricultural Economics. Industrial activity, as the year draws to a close, is the highest--after allowance for seasonal movements--on record. This assures continued strength in domestic consumer demand into early 1940, until effects of the expected slackening in productive activity after the turn of the year become apparent. The downturn is not likely to develop into a prolonged or severe recession.

The European war has caused marked changes in foreign demand for individual farm products, but the over-all effect, though slightly adverse, has not yet been great. The war is not expected to increase export demand for farm products during the next few months, but increased foreign purchases of industrial products may be a factor of strength in the domestic demand situation.

Wholesale commodity prices in general are somewhat below the September peak, but recently there have been signs of strength in several important farm commodities. The largest relapses since September have been in the farm and food groups. Despite the stimulating effects of war on world commodity prices, no pronounced rise in the general price level is expected in the near future.

Phasic Plant
Development

Science (December 15) contains an article on periodic aspects of phasic development of plants, by W. F. LoeHWing of the University of Iowa. After summing up recent work on this subject, he concludes: "It would seem, on the basis of recent evidence, that the thermo and photo phases are not as rigidly set apart nor as irreversible as originally suggested by Lysenko. Further, it may prove desirable and conducive to a better understanding of reproduction if the photophase is subdivided into a flowering and gametogenic stage. If the profound and rapid transformations occurring between inception of flower primordia and fertilization, namely, the phenomena of sex, are studied as intensively as vernalization and photoperiodism, they promise to contribute fully as much as the former to our understanding of reproduction. If speed and magnitude of transformation be criteria of vital significance, the gametogenic or sexual phase per se represents the stage of most profound alterations in the ontogeny of the higher plants."

Milk Price
Upheld

The Federal Circuit Court of Appeals (Boston) recently dismissed an appeal of five milk dealers from a federal court order enjoining them from violating a Department of Agriculture order regulating the minimum prices of milk in the greater Boston area, says an Associated Press report. Judge Calvert Magruder, who wrote the opinion, concurred in by Justices Scott Wilson and Hugh D. McLellan, said the method "adopted under the milk order seemed reasonably adapted to promoting successful operation of the equalization pool."

DAILY DIGEST

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Section 1

December 20, 1939

FARM-AID

TAX PLAN

President Roosevelt will renew his demand upon Congress in January that it provide for taxes to raise at least \$550,000,000 additional revenue with which to cover the amounts it appropriated in excess of budget estimates for farm benefits during the last two years, according to a report to the New York Times. The President made this known at his press conference yesterday afternoon as he confirmed reports that his fiscal experts were studying Secretary Wallace's certificate plan for financing farm aid and relieving the strain on the Federal budget. This proposal has been presented as capable of raising upward of \$250,000,000, and in essence is considered a sort of "streamlined" version of the processing tax which the Supreme Court outlawed in the celebrated Hoosac Mills case in 1935.

CROP

REPORT

The Department of Agriculture's final crop report for the season ~~showed~~ ^{showed} ~~yester~~ ^{that} farm production during 1939 was nearly 4 percent larger than the average of the 1923-32 "predrought period," despite a considerably smaller acreage harvest. Crop land harvested this year was reported at 325,000,000 acres--the smallest since about 1915--compared with an average of 354,000,000 acres in the predrought period. Higher yields more than offset the reduction in acreage. This year's total farm production is said to be about 1 percent below last year. The final report, based on December 1 conditions, placed the corn crop at 2,619,137,000 bushels, an increase of about 1 percent over the November estimate of 2,591,063,000 bushels. The wheat crop was put at 754,971,000 bushels, an increase of about 2 percent over the previous estimate of 739,445,000 bushels. The reduction in crop acreages this year was said to have been due to several factors. These included large supplies of grain, cotton, hay, canned vegetables and several other important farm products on hand last Spring; relatively low prices of some crops at planting time and "more general compliance" with the department's crop-control programs. A part of the reduction also resulted, the report said, from drought conditions in the Central Great Plains--conditions which have prevailed this Fall to the detriment of next year's Winter wheat crop. (Associated Press.)

DEMAND FOR

FARM PRODUCTS

The Bureau of Agricultural Economics declared recently that maintenance of increased industrial activity as the year draws to a close assured continued strength in domestic consumer demand into early 1940. The European war is not expected to increase exports of farm products during the next few months, the report said, but increased foreign purchases of industrial products may be a strong factor in creating the domestic demand. (Associated Press.)

Oxidized
Flavor
in Milk

In an article on the prevention of oxidized flavor in milk, in the Milk Plant Monthly (December) J. L. Henderson, of the University of California, says:

"Rations which are high in carotene content given to cows have been shown by many workers to decrease the incidence of spontaneously developed oxidized flavor and to render milk less susceptible to metal-induced oxidized flavor. Rancid flavors are likewise reduced by green feed and this effect has been attributed to the carotene content. Carotene concentrate, carrots, various green feeds and alfalfa cured in a manner which preserves its green color, have been used successfully for this purpose. Good management of a dairy herd now calls for maintaining a satisfactory carotene content throughout the year in order to render the milk less susceptible to oxidized flavor development. It also greatly improves the nutritional value of the rations for the cows and aids in maintaining a uniform vitamin A potency of milk throughout the year."

The author says that "the final account of the problem cannot be written at present since many factors must yet be studied. There are certain practical applications, however, that can be applied now without a full understanding of the underlying mechanism of how carotene can reduce the incidence of oxidized flavor in milk."

Carnegie
Report

American scientists must stand by to "aid in the great problem of the protection of civilian populations from attack," President Vannevar Bush of the Carnegie Institution of Washington said recently in his annual report to the board of trustees. Offering his first annual report -- he succeeded John C. Merriam as president of the Carnegie Institution last January -- Doctor Bush warned that practical scientific problems, however important, must not be allowed to shunt pure science aside.

"There is still a duty to keep the torch of pure science lit," he said, "and this duty is only the greater under stress. All the long struggle of a harsh evolution, the pitting of species against the environment has produced a being whose primary distinction is conscious cerebration, and whose crowning attribute is his intellectual curiosity concerning his complex environment and a thirst for knowledge transcending the mere struggle for existence..."

He reminded the trustees that the European war has added to the institution's responsibility, among other ways, by forcing the retirement from scientific fields of "many gifted individuals in other lands."

"At the same time," he asserted, "it is probable, as it was 22 years ago, that some of our laboratories will be called upon for practical efforts in the public interest in connection with the economic disruption and the emphasis on national defense. To any such call we should respond to the best of our ability and we should do so as far as possible without impeding our fundamental research programs." (Washington Post.)

Grassland
Laboratory

"A grassland laboratory possesses facilities for research not available in some other types of land, such as forest or agricultural land," says V. E. Shelford, University of Illinois, in a note in Science (December 15). "The great complication of forest vegetation makes many types of shelter and many niches affording protection from the elements to animals and smaller plants, which renders observations difficult. Tundra shares the advantages of grassland for researches involving field observations. These barren lands, however, are in a climate forbidding to continued scientific research and are remote from academic centers. Grassland, however, affords unrivaled opportunities for scientific biological study...Plans of interested scientists have called for an undisturbed check area which could be under observation for a sufficiently long period to permit an analysis of droughts, dust storms and rodent, predator and grasshopper outbreaks that occur separated by rather long intervals such as 30 to 50 years or more...The hope is that in the not too distant future scientific men can interest government agencies and granting bodies, which have helped with such projects in the past, to cooperate in providing land and facilities for basic terrestrial biological research. Such research would include analyzing the physiology of the animals in their relation to weather and climate, studies of competition, natural selection, reproduction, hormones, etc..."

Urea for
Seasoning
Lumber

W. B. Greeley, of the West Coast Lumbermen's Association (formerly Chief of the Forest Service) reports lumber seasoning tests by W. K. Loughborough of the Forest Products Laboratory in cooperation with a mill company and the association's department of grades, in West Coast Lumberman (December). "The first series of tests included urea," he says in part. "Urea is moderately toxic toward fungi; leaves no color in lumber; and is not corrosive. Although higher in cost, it apparently aids the seasoning of lumber as effectively as salt--possibly more so. At any rate, urea is the best bet thus far developed in experiments conducted by the association (on chemical aids in seasoning lumber)...The tests have opened up many valuable leads. Urea treatments have shown remarkable benefits in kiln drying wide hemlock ^{dimension} and other difficult items; and in permitting harsher and shorter kiln schedules to be used without serious degrade. A number of mills are now using urea successfully in kiln drying wide, thick clears; or in preparing structural railroad stringers for shipment. This is a new subject and we are all out to learn. The association will continue its investigations not only with urea but with other chemicals..."

K.C. Food
Terminal

A \$4,000,000 food terminal opened this month in Kansas City is the last word in produce markets. It covers 65 acres, has an 11-acre farmers' market, 58 wholesale fruit and vegetable units, banana-ripening rooms, tomato rooms, a cold storage plant with a capacity of 2,150,000 cubic feet and icing facilities to service 144 cars at a time. (Business Week, December 16.)

First A.M.S. The work of the Agricultural Marketing Service "in Annual Report helping to bring about efficient and fair marketing of farm products" is described in the first annual report of C. W. Kitchen, chief of this recently established agency of the department. Complex problems of modern-day agriculture, Mr. Kitchen says, fall heavily in the field of marketing and distribution. And wise marketing, he adds, depends upon the availability of fundamental economic data--upon a knowledge of supplies available and to come. He stresses the need for basic data in the intelligent appraisal of supply and demand factors, and in the formulation of production and marketing plans. Millions of dollars worth of agricultural commodities were sold last year on the basis of official crop and livestock estimates, which are made through the cooperation of some 200,000 voluntary crop reporters, most of them farmers. The reporters also provide information on the movement, utilization and stocks of various farm products, on prices received and paid by farmers, and on wages and employment of farm labor.

Kitchen's report shows how the country is blanketed by a nationwide market news service. A leased wire system connects the major markets, producing sections and shipping points. The information is distributed by radio, press, telephone and mail. Market information is now being disseminated one or more times daily over nearly half the radio stations in United States.

"We are all becoming cognizant of the fact," the A.M.S. chief states, "that if farmers are going to sell consumers must be able to buy." He pointed out that more attention than ever before is being focused on methods of reducing the margin between what the grower receives and what the consumer pays. Greater effort is being devoted to more efficient methods of grading, packing, packaging and shipping, so that waste may be lessened, quality of products improved and costs of marketing reduced.

The growth of the inspection, grading and classification service was emphasized. The tonnage of meat graded during 1939, for example, increased 10 percent over that of the previous year. Of the 321 million pounds of butter graded, more than 90 million pounds were sold in consumer packages containing a certificate of quality. Approximately 30 million pounds of dressed poultry were graded and 48 million pounds were inspected for condition and wholesomeness. A record of more than 500,000 cars of fresh fruits and vegetables inspected was established the past year.

A number of new standards were established. Terminology more easily understood by consumers defines new standards recently adopted for carcass beef. Revised standards of quality for creamery butter were put into effect. A revival in the production of Sea Island cotton necessitated the adoption of 11 new grades for this type. Research developed new techniques in crop estimating. A preharvest wheat survey was inaugurated. New formulas for considering the effects of weather, soil moisture and other factors on crop yields are being perfected.

To give the most thorough service, much of the work of the new bureau is handled through cooperative agreements with state agencies. Some 250 of these agreements were in effect the past year.

DAILY DIGEST

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Vol. LXXV, No.58

Section 1

December 21, 1939

A.G.BLACK
APPOINTED
TO FCA

President Roosevelt announced yesterday the resignation of F.F.Hill as Governor of the Farm Credit Administration and the appointment of A.G.Black, director of Marketing and Regulatory Work of the Department of Agriculture, as Mr. Hill's successor. Secretary Wallace, commenting today upon Mr. Hill's resignation, said that no changes were contemplated in the policy of the FCA. It was understood that he would seek changes in the law to "liberalize" the lending policies.

Mr. Hill is expected to rejoin the faculty of Cornell University as instructor in economics, and Mr. Roosevelt wished him "great success in the work that lies ahead." Dr. Black, born in Illinois in 1896, received his B.S.degree at the University of Illinois and M.A. and Ph.D.degrees at the University of Minnesota. He served on the faculties of both the University of Minnesota and Iowa State College, and went to the Agriculture Department in 1933. (New York Times.)

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FARM
INCOME

The Bureau of Agricultural Economics estimated yesterday that American farmers received \$7,625,000,000 from marketing of products during 1939. This compared with a 1938 estimate of \$7,627,000,000. This year's cash income was supplemented, the bureau said, by Government benefit payments of \$675,000,000 to farmers who cooperated with the Federal crop control program. Similar payments last year were given as \$482,000,000. The 1939 income from marketing represented an increase of 63 percent during the last seven years. The farm income slumped to a low mark of \$4,682,000,000 in 1932 after climbing to \$14,436,000,000 in 1919. The bureau said that this year's cash income would average about \$1,100 a farm, or about \$238 a person on farms, compared with \$717 and \$151, respectively in 1932. Not included in the income estimate was the value of products retained for consumption on farms. Those products were estimated to be worth \$2,000,000,000. The bureau also estimated that farmers received about \$2,000,000,000 from non-farm sources. (A.P.)

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APPLE
CROP

A commercial apple crop of 100,284,000 bushels for 1939 has been forecast. Last year it was 82,395,000 bushels. The Agriculture Department, in its last report of the year, said production was greater than last year in all sections except the Western States, where worm damage and hot weather reduced the crop in Washington, Oregon, Idaho and Colorado. The Department said appreciable quantities were left unharvested in most commercial areas because of low prices and unusually large quantities were diverted to processing plants. (Associated Press.)

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Section 2

Farm Feed

Grinding

"Agricultural engineering service to farmers in the matter of feed grinding awaits new knowledge on physical condition of feeds as a factor in feeding values," says Agricultural Engineering, December. "A recent survey has shown that in many states feed grinding is not being recommended by the agricultural extension services and is not generally practiced by farmers. Many farmers are reported to see little point in grinding feed unless it is ground fine. Such data as exists, however, points to coarse grinding of feeds as a more desirable and economic practice. Farm grinders, elevators, separators, mixers, and power units are available in sizes adapted to any scale of operations, and capable of doing an economical job of grinding any of a wide range of grains and forage to any desired degree of fineness. What are the most desirable degrees and combinations of fineness of feeds to show increased farm profit in meeting market demand for meats, milk, eggs, or wool, in consideration of grinding costs, feed consumption and waste, market quality premiums, and animal response according to class, breed, age, condition, and environment? Possibly more cooperative research between animal husbandry or nutrition specialists and agricultural engineers could give the answer."

Booklet on

Farm Forestry

A most interesting little booklet entitled "Farm Forestry" by W. A. Ross and W. R. Mattoon has recently been issued by the Office of Education, Department of the Interior, United States (Vocational Division Bulletin No. 196, Agricultural Series No. 52, U.S. Govt. Printing Office, Washington, 1939). The material in the bulletin has been prepared to provide teachers of what is termed vocational agriculture with valuable subject-matter written in a practical fashion to enable them to offer more effective systematic instruction on certain forestry work on the farm. The United States, it is said, contains some 470,000,000 acres of land which is classified as forest land. In addition there are several million acres which economists say are in excess of what will be required for the production of field crops and the raising of livestock and which are therefore available for forestry purposes. Timber is now a recognized crop in diversified farming programmes. Much of the booklet may be read with interest in its application to Great Britain. The United States has, as is well known, some difficult problems to solve owing to excessive lumbering of forest and excessive crop-growing on soils not applicable to such treatment. The so-called dust bowls have shown the direction to which such over-utilization leads. The hints given in this bulletin are therefore of major importance to the farmer. (Nature, November 11).

Parasitic Diseases "Research into the parasitic diseases of animals by the Zoological Division of the federal Bureau of Animal Industry during the past year included (1) skin tests for trichinosis, (2) phenothiazine as an anthelmintic, and (3) barium antimonyl tartrate as a treatment for the poultry gapeworm. In an endeavor to find an antigen that can be used for an allergic skin test of trichinosis in swine, 55 different antigens were experimented with on approximately 1,500 swine. Some of these swine were experimental animals artificially infected with *Trichinella spiralis* and others were market swine tested at packing houses before slaughter. Notwithstanding that others have reported success with a skin test for the detection of trichinosis in rabbits and man, none of the 55 antigens tested in this experiment gave satisfactory results. In each test some uninfected animals (as determined by post-mortem examination) reacted, and some infected animals failed to react positively to the test. The committee state that the possibilities have been by no means exhausted with the test of the 55 antigens, and express the hope, based upon the experiments with these antigens, that one may yet be found that will enable veterinarians to detect the presence of trichinosis in swine, if not by a test on the living animal, by injecting the antigen shortly before the animals are slaughtered and reading the reaction at slaughtering, thus obviating the tedious examination of sections of the diaphragm..." (Veterinary Medicine, January).

Chemistry's Aid to Weeding "Chemistry has relieved the tobacco farmer of another backache -- that of hand-weeding the plant beds. And there are a lot of backaches in this job. Squatting on planks across the beds, or on hands and knees, when the tobacco plants are just coming through the soil, tobacco growers have, by thumb-and-finger picking, been weeding the 19,000 acres of plant beds which are necessary to plant America's 1,800,000 acres of tobacco. The number of hours spent at this is anybody's guess. During the last few years, tests by several hundred growers in the tobacco-growing sections from Georgia to Kentucky and Maryland, have shown that by preparing the tobacco beds in the fall -- 60 to 120 days before seeding time -- and treating the soil with calcium cyanamid, they can kill the weed seeds. On average sandy loam soils, the cyanamid is used at the rate of one pound to a square yard. The interval between treating and seeding time is necessary for the killing action of the chemical to dissipate itself in the soil so the tobacco seed itself is unharmed...." (Farm Journal and Farmer's Wife, January).

Farm Labor In concluding an article in Social Forces (December) on "Distribution and Extent of Unemployment Among Farm Laborers in the United States," Lowry Nelson of the University of Minnesota states: "...The supply of agricultural wage workers in November, 1937, as obtained by adding the unemployed reported by the Census and the Bureau of Agricultural Economics estimates of employment, totaled approximately 3,222,000 persons. Adjustment by 30 percent for under-registration gives a figure of 3,439,500. There is reason to believe, however, that the total may be low and that the available supply would be higher, perhaps approximating 4,000,000 workers during periods of peak agricultural activity...The unemployment rate was higher than the average for the United States in the Small Grain, Middle Eastern, and the Cotton farming areas, while the lowest rates were in California and Florida, Corn and Dairy areas. The rates in the Range and Northwestern areas were slightly lower than for the country as a whole. Emergency work opportunities apparently were irregularly distributed by regions, with some tendency towards higher percentages being on work projects in areas of least unemployment."

State Certified Fresh Egg Plan "New Jersey's State Certified Fresh Egg plan was started because of a desire on the part of producers to identify their product through the channels of trade to the consumer," says Leon Todd of the New Jersey Department of Agriculture, in an article in the December issue of the Poultry Digest. "...All of the eggs are purchased at the auction markets by the regular house buyers, and are brought to the Flemington Market where they are candled and placed into the carton. The candling is done in a careful way and an attempt is even made to keep the lighter yolks in one carton, and the darker yolks in another carton so that the consumer will be assured of uniform colored yolks. The carton is sealed with a State Department of Agriculture label, thus identifying the product to the consumer. Both 15 and 30-dozen containers are used, with a preference for the 15-dozen cardboard boxes. The eggs are then delivered in a truck which has been especially painted for this program and which, incidentally, has been one of the most effective advertising investments we have made..."

The December issue of Phytopathology contains four articles written by Department of Agriculture workers: Three species of *Pythium* with large oogonial protuberances, by Charles Drechsler; Relative importance and seasonal prevalence of wood-staining fungi in the Southern States, by A. F. Verrall; Canker development by *Cronartium ribicola* on young *Pinus strobus*, by Ray R. Hirt; and Phytopathological Note (*Scirrhia acicola* (Dearn.), n. comb., the perfect stage of the fungus causing the brown-spot needle blight of pines, by Paul V. Siggers.

DAILY DIGEST

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Vol. LXXV, No. 59

Section 1

December 22, 1939

ASSISTANT SECRETARY

Grover B. Hill, whose appointment as Assistant Secretary of Agriculture was announced yesterday by President Roosevelt, is a Texas ranchman and farmer who has been associated with the work of the Agricultural Adjustment Administration since 1934. In 1934 he served as an alternate member of the Committee of Twenty-Five which was appointed by Chester C. Davis, at that time AAA Administrator, to work out a national cattle program. In that same year, Mr. Hill was regional director for New Mexico, Texas and Oklahoma of the cattle buying program under which 8 million cattle were salvaged during the great drought of that year, and processed into meat for relief distribution. For a time Mr. Hill served with the federal committee which moved feed into drought areas. After service on the committee which drafted the AAA range program, Mr. Hill in May 1934 was named field representative of the AAA. In November 1936, he came to Washington, and has been in charge of the range program in the southern region.

COTTON EXPORT SALES

The Department of Agriculture reported yesterday that 5,782,000 bales of cotton and cotton products were sold to foreign buyers under its export subsidy program between August 1 and December 15, but that less than half of that quantity had been shipped, exports to December 14 being 2,654,000 bales. Foreign shipments in the same period a year ago totaled 1,742,000 bales. Included in the sales for export were cotton products equivalent to 269,000 bales. (Associated Press.)

WINTER WHEAT CROP

The Agriculture Department yesterday forecast 1940's winter wheat production at 399,000,000 bushels. Because of the severe drought it was the smallest indicated yield since 1925. Production was 563,431,000 bushels this year, 688,133,000 bushels in 1938, and averaged 560,160,000 bushels for the ten years, 1928-37. (Washington Post.)

FOOD STAMP

Secretary of Agriculture Henry A. Wallace yesterday announced that the Food Order Stamp Plan for distributing surplus agricultural commodities will be extended to Columbia, South Carolina, and the rest of Richland County.

**Livestock
Improving**

In a report to the Secretary of Agriculture today on progress in livestock research and the control and eradication of livestock diseases for the fiscal year ended June 30, 1939, Dr. John R. Mohler, Chief of the Bureau of Animal Industry, calls attention to the near eradication of two diseases, namely, bovine tuberculosis and tick fever. He points out that tuberculosis among cattle has been practically eradicated from 47 states and that the work is nearing the same goal in California, the forty-eighth. Tick fever of cattle is now confined to only limited areas in southern Florida and southwestern Texas, now aggregating less than 1 percent of the area formerly infested with cattle ticks.

Income From

Farmers growing Christmas trees and floral greens enriched themselves by approximately \$10,000,000 last year, according to the Department of Agriculture. The

Soil Conservation Service and the Forest Service are encouraging this seasonal industry as a means of supplying farmers with a substantial supplementary income. As a part of its research program, the Soil Conservation Service is conducting experiments in Alabama, Iowa, California, Ohio and Maryland in cooperation with the Agricultural Experiment Stations for the purpose of developing economically valuable Christmas greens, plants and trees which will also aid in the control of erosion. It has been found that most of the principal varieties of Christmas trees--Douglas fir, balsam fir, black, red, and white Norway spruce, red cedar and many species of native pine--will grow on impoverished soil and untilleable banks. In addition, these trees provide effective protection against erosion on steep hillside areas. As a part of these studies, the Department is examining and testing a wide variety of Christmas greens. These include 18 species of holly and certain species of Firethorn, Japanese Rose and Photinia. These plants are also valuable as erosion control crops and are well-suited to interplanting with Christmas trees. They can also be planted on very steep hillsides where trees would have little chance for development. The demand for this type of Christmas decoration has resulted in many farmers growing greens as a conservation crop commercially, instead of hunting for them in the woods. Farmers in southern Delaware and southern Maryland plant and cut their crops with a view to conserving growth as well as the soil; and last year they netted \$650,000 from the sale of holly, wreaths and sprays alone. In the past, most of these greens have been gathered with no regard for conservation. As a result, some states have passed laws prohibiting the purchase, sale and picking of holly by persons other than the owners of the land or those having their written permission.

Care of Nut Trees "At the recent Rockport, Ind., meeting of the Northern Nut Growers Association, C. A. Reed of the Department, discussed some of the factors involved in the successful cultivation of nut trees in the home orchard," says the American Fruit Grower (December). "Climate has a marked influence on tree growth and production, and only those species which have demonstrated their ability to thrive in the region where they are to be grown may be planted with any certainty of success. Poor soils are not suited to nut trees, and only the rich deep soils are suitable for the better species of walnuts and hickories. The tree trunks of all young nut trees, especially if they are tall and exposed, should be protected from the hot sun. This may be done by wrapping with burlap, heavy paper, or a bundle of corn-stalks on the south side. All nut trees require full sunshine for good cropping. Close planting and the consequent shading of the lower limbs results in decreased yields. Trees growing by themselves in the open often bear unusually heavy crops. The walnuts, hickories and pecans need from 50 to 75 feet between trees in both directions, chestnuts and Japanese walnuts from 40 to 60 feet and filberts from 25 to 30 feet... Trees grown in poultry yards yield heavy crops and provide shade for the fowls. Whatever the crop, it is more than will be obtained from ordinary ornamentals..."

Ragweed In recent years, scientists of the United States Department of Agriculture discovered that tobacco grown after a natural weed fallow and receiving the right kind of commercial fertilizer apparently possesses the characteristics observed in the early days when the crop was grown on virgin land. The fact that tobacco planted after a bare fallow shows a rapid decrease in yield and quality demonstrates that the cover of spontaneous growth is the answer to the problem rather than simply allowing the land to remain idle. Tests completed recently by the Department scientists show that certain weeds are more desirable than others as a fallow. It may not be good news to persons susceptible to hay fever, but ragweed is one of the weed species showing the best results. Horseweed is another. On the other hand, tobacco following lamb's quarter showed some reduction in yield over bare fallow. In the same tests annual lespedeza has shown no advantage as a cover crop. Sweetclover, rabbit's foot clover, and wild peas have not always shown an advantage. The general beneficial effect of the weed fallow, report the scientists, is getting the tobacco off to a quick start and a rapid and uniform growth of the plants from transplanting time to maturity. This in turn resulted in uniformly high market value per acre and average price per pound, which demonstrates that the tobacco meets current demands for most manufacturing purposes.

Chemical Studies of Cotton Cotton technologists of the Agricultural Marketing Service and scientists of the Textile Foundation, the latter of whom are located at the Bureau of Standards, are undertaking a cooperative study of the deposition of pectic substances in cotton fibers. For this purpose samples of cotton fibers collected at short intervals, from 10 days after flowering until the bolls open, are being subjected to careful chemical and morphological analysis. Pectic substances have been known for a long time to form a part of the cotton fiber cell wall membrane. These pectic substances are acidic and are known to affect the dyeing behavior of cotton. Ordinarily, they are largely removed during the kiering operation, but their incomplete removal sometimes gives rise to variations in shades of dyeing in neighboring portions of the same cloth, owing to variation in the affinity of the cloth for the dye. Whether the pectic substances are located in the outer portion of the cotton hair membrane or are equally distributed through it in association with the cellulose is a matter about which there has long been considerable uncertainty. Also, it has not been known whether the pectic substances are deposited continuously during the entire growth period of the fiber or during the elongation phase of the fiber development only, as a part of the primary membrane. The research program of the Textile Foundation is guided by an advisory committee, and the Department of Agriculture is represented on this committee by Dr. R. Y. Winters of the Office of Experiment Stations. (A.M.S. News, December 15.)

Food, Drug and Cosmetic Act "It is generally conceded that the New Federal Food, Drug and Cosmetic Act, while inadequate and defective in certain respects, is a genuine improvement over the original act," says Theodore G. Klumpp, M.D., in the Journal of the American Medical Association (December 16). "From a long range point of view, the extent to which this improvement will be translated into actual accomplishment will depend largely on three factors: (1) the manner in which the provisions of the act are interpreted by the federal courts, (2) the extent to which Congress is willing to implement its enforcement through adequate appropriations and (3) the cooperation of scientific and professional groups and consumer groups..."

Goat Nutrition Studies "Reflecting the growing interest in goat milk production in the State, New Jersey's Agricultural Experiment Station has initiated goat nutrition studies," according to the Pennsylvania Farmer (December 16). "Goats are really particular about their food," Prof. William C. Skelley, in charge of the activity, emphasized. He said most of Jersey's goat owners are feeding their animals dairy rations of grain and hay, adding that "there is a question as to whether this is the most efficient or economical ration." Various goat rations will be tested in the new program for their effect on growth and milk production.

DAILY DIGEST

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Section 1

December 26, 1939.

COORDINATES LAND USE PROGRAMS In an effort to increase conservation of soil, forestry and human resources through complete coordination of its land use and rehabilitation programs, the Department of Agriculture, through Secretary Wallace, announced today changes involving all programs of the department affecting land use. Stating that as a nation "we have not yet succeeded in holding our own in the conservation battle," Secretary Wallace issued orders affecting the Agricultural Adjustment Administration, Farm Security Administration, Soil Conservation Service, Forest Service, Bureau of Agricultural Economics and the Extension Service.

On the theory that insecurity of tenure leads to misuse of land, as tenant farmers can afford to conserve soil resources only when they have an interest in the land extending over several years, the Farm Security Administration in 1940 will greatly intensify its efforts to help its borrowers obtain longer-term and better-written leases.... Through another change, the FSA, in its loan policies, will encourage crop diversification as a conservation measure. No loans will be approved where farm plans provide for growing but one cash crop. This policy is expected to popularize the practice of rotation in single-crop areas. (New York Times.)

WHEAT BELT MOISTURE The drought-ridden Midwest was cheered Saturday night by a fall of rain or snow, or both--first general moisture in many weeks. Light rain, sleet or mist, freezing as it fell, preceded the snow in some localities. The snow-fall extended from St. Louis to the high Rocky Mountains and from the Texas Panhandle to the Canadian border. (Associated Press.)

CEA REPORT BY DR. DUVEL Improvement of the futures trading system is the major objective of the Commodity Exchange Administration, Dr. J.W.T. Duvel, Chief, said today in his annual report. While the Administration was especially active during the year ended June 30, 1939, in suppressing manipulation, fraud, bucketing, fictitious transactions and misuse of customers' funds, major emphasis was placed upon the important economic phases of the futures trading system, such as the establishment of limits upon speculative transactions, the provisions of the futures contract, delivery practices and margin requirements.

Rearing Wild
Game Birds

Everett E. Wehr, Associate Zoologist, Bureau of Animal Industry, writing in the January issue of Veterinary Medicine, says: "Breederers of wild game birds have been forced to abandon the practice of brooding their chicks under bantam hens because they soon learned that the young chicks frequently became infected with the same diseases and parasites that were present in the foster mothers. The young birds acquired these diseases and parasites by ingesting food contaminated with the droppings of the infected foster mother hen, or by eating insects, snails, and other inter-mediate hosts infested with the immature stages of nematodes, cestodes, etc. The damage due to worm parasites is not so spectacular as is that due to such protozoan diseases as blackhead and trichomoniasis; however, the total loss occasioned by worm parasites is frequently just as great as that produced by the protozoan diseases mentioned. Worm parasites, especially nematodes, have been found to be abundant, both as to numbers and species, in wild game birds, and many of these have been found to be identical with those parasitizing domestic fowl." The author further attempts to discuss in a general way the principal nematodes common to domestic and wild fowl and points out the danger of rearing the two types of birds together, or even in close proximity to each other.

Grassland
Farming

Stressing the importance of grassland farming and the need for suitable machinery in this field, Harry E. Besley of the American Society of Agricultural Engineers, in an article in Agricultural Engineering (December) says in part: "The principal mechanical difficulties have resulted from the use of regular haying equipment to harvest the green crops which weigh three to four times more than hay. Existing machinery has been improved so that field breakdowns are now the exception rather than the rule. Silo fillers generally have been adapted to handle the green material without difficulty. Pumps have been attached so that the preservative may be added conveniently...Aside from the elevation of the field chopped material, there are other questions to be answered, including how and when to harvest and how to lighten the work at the cutter. At the New Jersey station a cooperative investigation with the Bureau of Agricultural Chemistry and Engineering, U.S. Department of Agriculture, is under way to determine time, labor, power, and machinery investment requirements for harvesting and ensiling green forage crops other than corn. A comparison is being made of the various methods in use for harvesting grass. These include the mower with rake and hay loader, mower with windrowing attachment and loader, mower and pick-up chopper, and the combine which will cut, chop, and load the chopped material...Additional investigations of machinery and methods may well be made at other stations where test facilities are available..."

Weather Bureau "First things first"--to enable the Federal
Annual Report weather service to keep abreast of farm, business and
 professional needs--is the aim of the U.S. Weather
Bureau, says F.W. Reichelderfer, chief, in his annual report. Research
continues to be the base on which better service is built. Aeronautics
and radio have opened new possibilities to the weather man, but at the
same time have made new responsibilities. Adapting the weather service
to demands of a modern world and to developments in meteorology and
kindred fields, means continuous advancement. Agricultural planning;
forest, soil and water conservation programs; flood control--and even
minor variations in climate which have changed the occupations and
lowered the incomes of thousands of citizens--are among problems demand-
ing aggressive attention. Because there are few human activities that
can boast complete indifference to weather, present or future, Doctor
Reichelderfer points out, it is increasingly necessary to know more
and more about climatic changes and trends. The Weather Bureau is ex-
tending its network of climatological stations as rapidly as possible
to meet these modern demands.

Hog Breeding State and Federal scientists in the Corn Belt--
On Trail of which is also the Hog Belt--are now nearly three years
Corn Breeding on their way in what will necessarily be a long-time
 investigation of how far it is possible to go in improving
the production of market hogs by the combining and recombining of inbred
lines of swine. Inspired by the gains in yield, uniformity, and quality
resulting from scientific corn breeding, hog growers have been asking
whether it is not possible to apply similar genetic principles, involving
recombinations of hereditary characters in swine breeding. Recognizing
the inherent differences between plant breeding and animal breeding, a
chief aim of the swine studies is to determine how far the hog breeder
can follow the lead of the corn breeders and how to go about it. About
40 lines of inbred hogs--in three stages of inbreeding--have been
established at State experiment stations in the Corn Belt, and a few
initial crosses of inbred animals have been made, not so much with the
expectation of immediate comparisons with the original stock, but more
as a basis for comparisons with future results when the inbred lines
are more thoroughly established.

A Tribute to "F.A. Silcox, chief of the United States Forest
A Forester Service since 1933, was the very paragon of a public
 servant," says an editorial in the Washington Post
(December 21). "A man of fine presence, keen intelligence and superb
technical competence, he never demeaned his service as a Government
official by regarding it merely as a means of livelihood or as a stepping
stone to greater material rewards outside...The Nation, the Government
and a host of friends in Washington and throughout the country are
poorer for his untimely passing."

Soybean
Paints

"Pioneering work of the Illinois Experiment Station with soybean-oil paints is expanding and producing results in a way which promises extensive markets for the rapidly growing soybean industry," says F.J. Keilholz, extension editor, University of Illinois, in an article in the Country Gentleman (January). "It was in 1930 that Dr. W. L. Burlison, head of the department of agronomy at the University of Illinois, began the first comprehensive studies of the use of soybean oil in paints and varnishes. Since then the new U.S. Regional Soybean Laboratory on the university campus has made some further tests showing that such paints and varnishes stand up against weather exposure as well as those made from tung, perilla and linseed oils. At the present time, practically all tung and perilla oil, and part of the linseed oil, are imported into this country. Hence the replacement of these by widespread use of soybean oils in varnishes and paints would mean a vast market for soybeans..."

Farm Real
Estate
Taxes

Farm real estate taxes have changed little in the last five years, notwithstanding increases in public spending for relief and rehabilitation from the economic depression of the early Nineteen Thirties. This is revealed in a study by the Bureau of Agricultural Economics of the trend of taxes during the last half century. Tax levies per acre now stand at 186 as a national index figure, the 1909-13 pre-World War period equaling 100. The current index of 186 compares with 178 in 1934, and with 281 in 1929, which is the highest on record in the last fifty years. Taxes per acre have increased about 5 percent since 1934, and now are at about the same average figure as in 1918.

Long
Turkey
Days

"Artificial lighting had a marked effect on production of turkey eggs in an experiment carried on at the branch experiment station at Hermiston, Oregon, reports H. K. Dean, superintendent. Lights were tried on young turkey hens of both an early and late maturing strain, and in both instances the production of eggs was markedly increased, although most effect was noted on the early maturing strain. The hens given artificial light were housed and provided with enough extra light morning and evening to give them 13 hours of light daily, beginning December 21. First eggs from the lighted hens were laid the middle of January, while those without light started laying the first week in March. Early maturing birds under lights laid an average of 76.9 eggs for the season, while birds without lights laid only 41.2. The late maturing birds laid an average of 55.6 eggs under lights and only 43.6 without. A great variation in individual production was shown by the fact that the best hen of the early maturing ones in the lighted pen produced 92 eggs while the poorest laid only 16 eggs during the season." (Hoard's Dairyman, December 25.)